



The Animal Behavior Management Alliance 2015 Annual Conference “See the World through Behavior”



Denmark 13-18 April 2015
www.theabma.org

Welcome from our President



Welcome to the 2015 Animal Behavior Management Alliance conference! We are thrilled to join our European colleagues for the first time and to "See the World through Behavior!"

We are lucky enough to have not one, but TWO keynote speakers this year. Ken Ramirez, Executive Vice President and Chief Training Officer of Karen Pryor's Clicker Training will kick off the conference. Ken's breadth of knowledge spans from pets, to service animals, to zoological and marine animals fitting in perfectly with ABMA's mission and core values. We will also hear from Rudi Van Aarde, Chair of Conservation Ecology at the University of Pretoria and Director of Conservation Ecology Research Unit. Dr. Van Aarde's research has led to new and innovative ideas for managing wild elephant populations in Africa.

We also have a world-class line up of speakers for this conference! Steven Martin has once again paired up with Dr. Susan Friedman to offer a pre-conference workshop as well as a three part special presentation during the conference. Sabrina Brando will be presenting the Research and Evaluation Workshop on the importance of animal enrichment 24 hours a day, 7 days a week! We are also excited to have Barbara Heidenreich joining us as a special speaker. Dr. Jenifer Zeligs will be introducing us to her new book which gives us a comprehensive overview of all techniques available to animal behaviorists for modifying behavior.

I would especially like to thank all of our paper and poster presenters! Our conference surveys consistently demonstrate that your presentations are the reason that people keep coming to ABMA conferences. ABMA is a member driven organization which means that YOU are our most valuable asset. The sharing of knowledge and ideas in a safe forum is not just the backbone but also the highlight of our conferences!

What would an ABMA conference be without site visits? We are thrilled to have Copenhagen Zoo and Odense Zoo cohosting this year. Both zoos maintain progressive behavior management programs and are looking forward to sharing them with us. We are also honored to visit The Blue Planet aquarium for our Poster night. I truly hope you are ready to have fun!

ABMA packs a lot into our conferences so that we can make the most of the small amount of time we have! Whether you are new to ABMA or are a seasoned member and are looking to make the most of your ABMA membership, consider joining a committee. We have many different committees to choose from - everyone is welcome to join in the committee meetings on Thursday to learn more about how you can be involved. You can find more information about each committee in the Conference Program or online at theABMA.org.

We believe that this conference will allow us all to see a world of behavior. At the end of the week, you will have the opportunity to vote for the presentation that has had the biggest impact on you during the conference. Make the most of your time here and above all enjoy yourself! On behalf of the ABMA leadership, we look forward to serving you and we welcome your feedback. Have a wonderful conference!

Margaret Rouser
President

See the World through Behavior

Copenhagen, Denmark ★ April 13-18, 2015

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Conference Hosts



Disclaimer

One of the core values of the ABMA states that:

"The sharing of knowledge and new ideas is fundamental to advancing animal behavior management."

We do this in many ways, such as through our conferences, publications, and social media. This week you'll be seeing a lot of fascinating and thought-provoking talks, workshops, and presentations. Some you may agree with, others may challenge your perceptions and ideas. And while the content that you see in each presentation reflects the views of the author and does not necessarily represent the feelings of the ABMA or the board of directors, we think that the diversity of subjects and viewpoints represented by our members, at our conferences, in our publications, and via our social media outlets is one of the strengths of this organization. We encourage you to listen to all that you hear this week with an open mind, because you might be surprised by what you learn. Thank you and enjoy the conference!

General Information



Badges

Please make sure to wear your badges throughout the conference. These badges are your admission to the various events and programming.

Behavioral Management Fund

The BMF Committee overlooks the Scholarship/Grant process by developing the criteria for the application, review of the applications, and selection of a recipient. The committee is also responsible for the fundraising and development of the Behavior Management Fund. The proceeds a portion of the silent auction support the Behavioral Management Fund.

ABMA Travel Scholarship

The purpose of this scholarship is to assist an ABMA member who would otherwise be unable to secure financial support to attend the conference. The Travel Scholarship will help the award recipient by giving them the ability to present their work and it will help the organization by giving ABMA members the opportunity to hear presentations that they would not have otherwise been able to. The Travel Scholarship supports the *ABMA Core Value of "Sharing the Knowledge"*. The Travel Scholarship is made possible by the Behavior Management Fund (BMF) Committee.

This year's recipient is Anaka Nazareth from the Maymont Foundation in Richmond, Virginia. Her paper is titled "A chicken's choice: positive reinforcement training vs free food". The presentation will share the results of her Master's thesis research project in Animal Behavior and Conservation.

For more Travel Scholarship information or to apply for next year's conference, please visit www.theabma.org.

Conservation Gift

Each year the BMF provides a conservation-related gift to conference delegates. This year's gift is from Elephant Parade. This organization has worldwide art exhibitions that bring awareness to elephant conservation. The 20% of the proceeds they raise is donated to elephant welfare and conservation projects. For more information go to www.elephantparade.com.

Business Services

Business services can be found at the reception desk.
There is free Wi-Fi throughout the hotel.

Conference Survey

Once again this year ABMA is being green and doing the conference surveys online. The results of these surveys help the ABMA to make each conference successful and better suited to the members' needs. Your responses are greatly valued and do ensure the ABMA's future conference programming is suited to the interests of our members. The survey will be emailed to registered delegates at the closing of the conference or accessed by the following link:

<http://survey.constantcontact.com/survey/a07eaicm35mi5pus5o9/start>

These surveys are an important component to the assessment of the ABMA, and we thank you for your time in completing them. If you do not receive a conference survey, please contact the Research and Evaluation Committee Chair, Darren Minier, at deminier@gmail.com.

Silent Auction Donations

Silent auction items can be dropped off at registration. We will need to know the value of your item for the bid sheets.

Transportation

- Bicycles can be borrowed from the hotel
- The train and bus station is a 10-minute walk from the hotel
- The Nyborg taxi can be ordered at the hotel reception or at the train/bus station



SCHEDULE AT A GLANCE



SUNDAY, APRIL 12

9:00am-6:00pm **Raising the Bar: Contemporary Animal Training**
Steve Martin, CEO, CPBT-KA and Susan Friedman, PhD

MONDAY, APRIL 13

8:30am-1:00pm **Preconference Trip - Givskud Zoo**
1:00pm-5:00pm **Registration**
6:00pm-9:00pm **Icebreaker**

TUESDAY, APRIL 14

7:00am-8:00am **Registration**
8:00am-8:30am **Welcome**
8:30am-9:40am **Keynote Address – Ken Ramirez**
Break
10:00am-12:00pm **Presentations**
12:00pm-1:00pm **Lunch**
1:00pm-2:00pm **Connecting with Our Audience!**
Steve Martin; Natural Encounters, Inc
2:00pm-2:40pm **Presentations**
Break
3:00pm-4:00pm **Conscientiously Creating and Evaluating Motivation**
Barbara Heidenreich; Barbara's Force Free Animal Training
4:00pm-5:00pm **Presentations**
6:00pm-7:30pm **Silent Auction**

WEDNESDAY, APRIL 15

7:30am **Depart for Copenhagen Zoo**
10:00am **Arrive at Copenhagen Zoo**
12:00pm-1:00pm **Lunch and Members' Business Meeting**
5:30pm **Depart for the Blue Planet**
6:00pm-9:00pm **Poster Night at the Blue Planet**
9:00pm **Depart for the hotel**
11:00pm **Arrive at the hotel**

THURSDAY, APRIL 16

7:30am-8:00am **Registration**
8:00am-9:20am **Keynote – Rudi van Aarde**
9:20am-9:40am **Presentations**
Break
10:00am-12:00pm **Presentations**
12:00pm-1:00pm **Lunch**
1:00pm-2:00pm **What's the Motivation?**
Steve Martin, Natural Encounters, Inc.

2:00pm–2:40pm **Presentations**
Break

3:00pm–4:00pm **The Power of Relationship- Forming and Maintaining a Valuable Motivation Tool**
 Dr. Jenifer Zeligs; Animal Training and Research International

4:00pm–5:00pm **Committee Meetings**

5:00pm–6:00pm **Program Council Meeting**

6:30pm–9:30pm **Career Night**
Book Signing
Animal Training 101: The Complete and Practical Guide to the Art and Science of Behavior Modification
 Dr. Jenifer Zeligs
Elephants-A Way Forward
 Rudi van Aarde

FRIDAY, APRIL 17

8:45am **Depart for Odense Zoo**

9:45am **Arrive at Odense Zoo**

4:15pm **Depart to Odense by boat for a free night in Odense**

SATURDAY, APRIL 18

7:30am–8:00am **Registration**

8:00am–9:40am **R&E Workshop**
Promoting Good Zoo Animal Welfare, 24/7 Across Their Lifespan
 Sabrina Brando; Animal Concepts
Break

10:00am–12:00pm **Presentations**

12:00pm–1:00pm **Lunch**

1:00pm–2:40pm **Presentations**
Break

3:00pm–4:00pm **What’s the Function?**
 Susan G. Friedman, PhD.; Behavior+ Works

4:00pm–5:00pm **Presentations**

5:00pm–5:15pm **ABMA 2016 Announcement**

6:30pm–7:00pm **Cocktails**

7:00pm–10:00pm **Banquet**

SUNDAY, APRIL 19

9:00am–4:00pm **Post Conference Trip – Adventura Sailing and Porpoise Watching**

DAILY SCHEDULE

Sunday, April 12th



9:00am-6:00pm

Raising the Bar: Contemporary Animal Training
Steve Martin, CEO, CPBT-KA and Susan Friedman, PhD

Hall/Sal K

Raising the Bar: Contemporary Animal Training

Steve Martin, CEO, CPBT-KA and Susan Friedman, PhD

Full Day Workshop

Date: April 12, 2015

Time: 9am - 6pm



Birds and Beyond
www.naturalencounters.com



www.behaviorworks.org

Specially designed for all levels of animal care professionals, this new workshop provides a unique opportunity to learn contemporary animal training technology from two necessary and compatible perspectives -- the natural science of behavior change and the ethical principle, "least intrusive alternative." The workshop will focus on three main goals:

1. How to train new behaviors, strengthen existing behaviors, and replace problem behaviors using positive reinforcement
2. How to establish motivation through the use of trust accounts, empowerment, reinforcer management (including secondary reinforcers and diet delivery), environmental set up, and clear cues
3. The key features of inspiring action through educational programs and presentations

Two hands-on exercises will provide practice, shaping and behavior problem solving, and a great opportunity to network with friends and colleagues in a safe learning environment.

Hope to see you at the ABMA Annual Conference!

Registration is \$50.00

Space is limited to 50 participants

Daily Schedule

Monday, April 13th



8:30am-1:00pm
1:00pm-5:00pm
6:00pm-9:00pm

Pre-Conference Trip-Givskud Zoo
Registration
Icebreaker

Conference Lobby
Conference Lobby
Hall "TÅRNSAL"



Daily Schedule

Tuesday, April 14th



7:00am-8:00am	Registration	
8:00am-8:30am	Welcome	Hall/Sal H-J
8:30am-9:40am	Keynote Address	Hall/Sal H-J
The Changing Face of Training in the Modern Zoo: The Welfare Connection		
Ken Ramirez; Karen Pryor Clicker Training		

The modern zoological trainer has become increasingly aware of the benefits of training and the ways in which it assists in caring for our animals. However, that does not keep our detractors from criticizing our profession and misunderstanding our motives. Sometimes the criticism is based on misinformation, half-truths, or outdated facts. But at other times the criticism is based on real information about facilities and programs that are not adhering to best practices and modern standards. It is our responsibility as professional trainers to make sure that we represent and practice our craft properly, not because protest groups have shined a light on us, but because it the right thing to do. More importantly, we need to rally behind our professional organizations to help in bolstering and promoting information about the good work so many of us are doing in caring for our animals. We must assist facilities and programs that do not meet current best practices to move into the modern era or distance ourselves from their poor work. If we do not find the way to accomplish this we will always be measured by the lowest common denominator. This presentation will take a look at the evolution of training in the zoological field and highlight some of the common challenges and suggest some possible solutions. The goal is to focus on both perceptions and realities as well as offer some practical recommendations for how we move forward in these challenging times.

Ken Ramirez is the Executive Vice-President and Chief Training Officer of Karen Pryor Clicker Training where he helps to oversee the vision, development and implementation of training education programs for the organization. This allows Ken to help bring positive reinforcement training to all corners of the animal training world. Previously, Ken served as the Executive Vice-President of animal care and animal training at Chicago's Shedd Aquarium, where he developed and supervised animal care and animal health programs, staff training and development as well as public presentation programs for a collection of more than 32,000 animals. He worked at Shedd Aquarium for over 26 years and continues as a consultant to this day. A 35+ year veteran of animal care and training, Ramirez is a biologist and animal behaviorist who has lived in five countries and worked or consulted for zoological organizations around the world. He began his training career working with guide dogs for the visually impaired and has maintained a close affiliation to pet training throughout his career. He hosted two successful seasons of the pet training television series *Talk to the Animals* that compared pet training to the important work done with training and caring for animals in zoological facilities. He has also recently worked closely with several search and rescue dog organizations, service dog groups, as well as with bomb and narcotic dogs. Ramirez has been active in several professional organizations, including the International Marine Animal Trainer's Association (IMATA), of which he is a past president. Ken has written for numerous scientific publications and authored countless popular articles. He authored the book *ANIMAL TRAINING: Successful Animal Management through Positive Reinforcement*, published in 1999. He also teaches a graduate course on animal training at Western Illinois University.

Break

10:00am–12:00pm **Presentations**

Hall/Sal H-J

It's All About the Individual

Valerie J Hare; The Shape of Enrichment, Inc.

Environmental enrichment, as a concept, is now well recognized as an important consideration in the welfare status of any captive animal. Effective enrichment should be goal-based, aimed towards achieving one or more behavioral, biological, or logistical goals. At The Shape of Enrichment, we recommend following a systematic planning process (example available on www.enrichment.org).

Enrichment strategies should be based on the animal's behavioral biology, targeting behaviors and abilities appropriate for both the species and the individuals involved. Enrichment, like welfare, is a concept that pertains to individuals, not populations. What may be enriching for one animal may not be enriching, or be highly stressful, for others.

To ensure the needs of the individual are properly addressed, there are a number of attributes to be considered when designing an enrichment plan. Attributes such as personal preference; behavioral adaptations; social status; age; gender; ability; and reproductive status will be discussed and examples of enrichment strategies for each will be presented.

When Scent Training Makes Sense: Seeing The World through a Dog's Nose

Anna Oblasser-Mirtl, Animal Training Center

Some may say that dogs "see" the world through their noses, and there are many well-known ways in which people utilize the extraordinary canine sense of smell. One lesser-known application of this particular talent is as a Diabetic Alert Dog (DAD). DADs are trained to detect abnormal blood sugar levels and to alert the diabetic or another person when these levels occur. For the diabetic, as well as their family, having a DAD is a life-altering experience that greatly reduces the constant fear that accompanies Type 1 diabetes.

As in other areas of dog training, the methods used to train DADs have not always been entirely positive. At the Animal Training Center (ATC), we sought to change that by developing a program that not only fully utilizes positive reinforcement methods of training and ensures a reliable alerting behavior, but that also allows the dog to truly become a happy member of the diabetic's family. This program has been used with dogs bred and raised at the ATC, in which case training begins when the puppy is only two days old. It has also been effective, however, with dogs rescued from shelters at various ages. To date, we have successfully trained and placed 23 DADs and continue to be amazed by their abilities, such as night alerting and remote alerting. The ATC program has resulted in extraordinary partnerships that bring safety and joy to diabetics, as well as to the dogs by their sides.

Don't Say Don't: Moving Past "How Do I Stop My Animal From..."

Chris Jenkins, CPBT-KA; Natural Encounters, Inc.

"How do I stop my animal from...?" It is a common phrase used throughout the zoo and animal training world, and one that unwittingly leads trainers to come up with punishment-based strategies in dealing with their animals' behavior challenges. Wonderful possibilities exist in modifying and replacing unwanted behaviors through positive reinforcement, but the first step for many trainers is to first change their mindset from "How do I stop my animal from...?" and instead replace this question with "What do I want them to do instead?"

This paper will take a look into the challenges associated with training strategies that focus on the reduction or elimination of behaviors, and will outline an alternative strategy that instead involves identifying a specific problem behavior in observable terms, analyzing the influences in the environment that are helping to maintain it, and formulating a plan to use positive reinforcement to train the animal to do a different, incompatible behavior instead. Specific behavior problems and their resultant training strategies will be presented in detail to illustrate this process, helping to set the stage for attendees to consider for themselves how they might adjust the way in which they approach behavior challenges in order to empower them to solve these problems in a way that strengthens relationships and deals with their animals in more positive, less intrusive ways.

BMF Scholarship Winner

A Chicken's Choice: Positive Reinforcement Training Versus Free Food

Anaka Nazareth; Maymont Foundation

As the use of positive reinforcement training (PRT) becomes popular to effectively and humanely manage animals in human care, studying its effects becomes increasingly important. Past studies have focused on measuring the behavioral and physiological responses of animals trained using PRT. However, very few studies have attempted to address the preferential response of animals towards PRT, or to examine whether, if given the choice, an animal would choose to participate in a PRT session. In this study, the degree of preference and strength of motivation that animals exhibit towards PRT was measured. Thirty-four laying hens participated in three tests: a conditioned place preference test, a choice test, and a consumer demand test. Each of these tests compared the hens' responses towards two treatments: (a) obtaining food by participating in a PRT session and (b) eating "free" food out of an easily accessible bowl. Overall, the results indicated that the hens showed no strong preference for either treatment and were equally motivated to access both a PRT session and free food. Thus, the hens did not find PRT aversive, which in combination with results from other studies with hens, suggests that PRT is effective and humane for animal husbandry and management.

Operant Conditioning in an Elder and Wounded Striped Hyena

Rodrigo Salas Moncada

This paper presents the case of a striped hyena (*Hyaena hyaena*) that was admitted to the veterinary hospital because of multiple health problems, therefore we needed to apply medical treatment several times per day. We developed a training program that allowed us to teach different medical routines without any physical restraint, and because they are dangerous and unpredictable, we decided to do it by protected contact.

The chronic health problems that the hyena presented sadly produced the necessity of isolation for long periods of time, limiting its options for behavioral development.

Operant conditioning as a basic tool for management of captive animals and for offering physical and mental stimulation is very useful, but it is a lot more complicated when injured or sick animals presents some discomfort or pain which requires daily treatment. That's why using training programs with healthy animals prepares them and us to resolve future problems. This is where the importance of this paper is reflected, the hyena was an old and non-trained animal and yet it was able to learn the exercises needed for the treatment while he was in soreness. Being in discomfort scenarios for long periods of time creates stress episodes on individuals and predisposes unwanted behaviors, so the training and enrichment are excellent occupational therapy. The hyena showed a magnificent response to training and enrichment and we can supply the medical treatment efficiently.

Operant Conditioning in Bats Helps Study Their Vision

Clément Cechetto, Annemarie Surlykke; Dept. Biology, SDU, University of Southern Denmark

Bats use echolocation to hunt and navigate. Most bat species have developed complex laryngeal echolocation and due to the effectiveness in terms of perceptual detail that is available to bats through echolocation, their use of vision has largely been ignored. In fact, all species of bats possess eyes, which presumably are of adaptive value to bats, since eyes that are of no use have been shown to disappear in other vertebrate species (e.g. *Astyanax mexicanus*). Few experiments exist, but a few species of echolocating bats seem to be able to use vision in dim light as a navigational cue or even, in rare cases, as a hunting cue. We aim to shed light on this understudied field of bats' sensory ecology. We started by assessing vision in two species of vespertilionid bats (*Myotis daubentonii* and *Nyctalus nyctalus*). We use operant conditioning to first determine the intensity threshold in these bats. The bats were trained and tested while crawling on a Y-shaped platform in a psychophysical 2AFC paradigm with a weighted staircase method (one down/three up). The first results suggest that these bats are able to see green light (~540 nm) at intensities as low as moonless starlight (i.e. 0.03 lux). This experiment will be expanded with different wavelengths and backed up by physiological and anatomical data.

12:00pm-1:00pm

Lunch

1:00pm-2:00pm

Connecting with Our Audience!

Hall/Sal H-J

Steve Martin; Natural Encounters, Inc.

Education is a key component in the mission statement of most zoological institutions. However, many educational programs are little more than downloads of natural history information that often exceed the attention span of the audience. Even keeper talk programs conducted at exhibits often fail to engage audience members or inspire caring and conservation action as keepers recite mundane information in front of placid animals. Producing a truly affective program involves several key elements including; emotion, intrigue, anticipation, action, humor, entertainment, and conflict and resolution. Teaching animals to perform species-appropriate behaviors in exhibits is not only enriching for the animals, it provides a perfect stage for an inspirational education program. This paper will share strategies for creating truly engaging and inspirational public programs.

Steve Martin began his professional animal training career when he set up the first of its kind, free-flight bird show at the San Diego Wild Animal Park in 1976. The show gained acclaim for its ability to combine the entertainment of birds performing natural behaviors with inspirational conservation messages.

In 1984 Steve Martin began teaching animal keepers the art and science of behavior change to enhance husbandry, enrichment, and behavioral management of exhibit animals. He has now served as an animal behavior or visitor experience consultant for over 100 zoological facilities in more than 20 countries. Steve is an instructor at the AZA Animal Training School, an instructor at the Elephant Management School in Hamburg, Germany, a member of the AZA Animal Welfare Committee, and a Trustee with the World Parrot Trust. He is also President of both Natural Encounters, Inc. (NEI) a company of over 40 professional animal trainers and Natural Encounters Conservation Fund (NECF) a company dedicated to raising money for conservation programs. NECF has now raised and donated over 1.3 million dollars to in situ conservation programs around the world.

2:00pm-2:40pm

Presentations

Hall/Sal H-J

Infancy to Adulthood: The Growth, Development and Nurturing of a Behavioral Husbandry Program

Michelle Skurski and Katie Leighty; Disney's Animal Kingdom

In 1998, Disney's Animal Kingdom opened and our Behavioral Husbandry program was in its infancy. In the 17 years that followed, much like raising a child, our program has gone through numerous life stages. In the early years, we were busy developing and implementing a programmatic framework; SPIDER. Through our clumsy toddler years we were there for every step, assisting animal care teams anywhere needed, from training new shifting behaviors to participation in medical procedures. This was a time when we were building capacity in our animal keepers. The rebellious teenage years were a handful to manage; keepers were more independent and at times hesitant to ask for help when facing new challenges. Together we worked through our growing pains and are now entering adulthood. Given the age of our park, our animal care teams are now strategically managing both geriatric animals in the collection while also planning for growth in their areas including bringing in new animals, new species and modifying exhibits. Over this time, our Behavioral Husbandry team moved around quite a bit in terms of its leadership and structure within our animal care team. It has now happily found its home in the Science department. This grounding in science has provided the perfect opportunity to review our program, documents and procedures much as we did in the early days of SPIDER. This presentation will discuss the natural transitions in the life of a behavioral husbandry program and provide tips for dealing with the inevitable bumps in the road.

Building Confidence and Curiosity - Teaching an Elephant How To Use Enrichment

Holger Wisbøl, Pernille Andersen, Rasmus Pedersen; Copenhagen Zoo

The Elephant team would like to make a presentation about one of our elephants, Jula. She arrived about 3 years ago, and she has a very characteristic, stereotypical behaviour: she weaves and shakes her head a large part of the day. The Zoo would like to diminish said behaviour and started a programme (the "Jula-programme"), where the keepers and the training coordinator, came up with a plan to do exactly that, through enrichment and training.

We immediately learned that she did not do well with, even very simple, enrichment. She did not seem very curious in her environment, and she also seemed to lack confidence in her ability to manipulate her surroundings. We therefore had to start out slow with extremely simple enrichment, and then work our way up to more complicated stuff, otherwise she would give up at once and resume weaving. We also had to consider things like the fact that she would prefer to weave while using an enrichment object, so we had to take certain precautions to avoid "self-reinforcing" unwanted behaviour.

We have some footage of her first encounter with the very simple enrichment, and then we would like to compare it to the present day, to show her/our progress.

The reason we would like to make this presentation is to share our story, and perhaps bring inspiration to others who might have similar problems. We would like to underline the importance of knowing the individual so as to better suit their enrichment to their needs.

Break

3:00pm – 4:00pm

Conscientiously Creating and Evaluating Motivation

Barbara Heidenreich; Barbara's Force Free Animal Training

Force free animal trainers pride themselves on empowering animal to participate, and providing desired consequences for this participation. This requires finding ways to make consequences desirable. Creating motivation can be as seemingly innocuous as withholding a preferred food item. However it can also go to the extreme of extended deprivation of food, enrichment, play, movement, social interactions, heat, cover, etc. to

increase the value of access to these large items or experiences. Some methods for creating motivation lead to the question of whether the animal is seeking relief from a negative subjective state or anticipating a pleasant outcome for doing a behavior. This raises many questions about how motivation is created and what are best practices for the animal training industry. Are there optimal standard operating procedures trainers should use to create motivation? Is there a hierarchy of procedures to consider when creating motivation? How do we measure an animal's interest in the potential reinforce, and how do we measure satiation? Are we considering the ethology of the species when creating motivation or area we asking the animal to conform to meet our needs beyond what is reasonable? Can reinforced behavior influence an animal's demeanor in the presence of known reinforcers and is there a way to take that into consideration when measuring motivation? This paper will give structure, boundaries and recommendations on how to mindfully create and evaluate motivation in animal training in an effort to advance the industry and improve animal welfare.

In 1982 Barbara Heidenreich secured her first job working with animals in a veterinary hospital. After exploring different animal related jobs and receiving her degree in Zoology from UC Davis in 1990, Barbara started her career as an animal trainer in a zoological park. She has been a professional trainer ever since.

Barbara provides consulting services to zoo, nature centers, and other animal facilities. She lectures regularly to the veterinary community and is an adjunct clinical instructor at Texas A&M University, Veterinary Medicine and Biological Sciences. Barbara is a former president of the International Association of Avian Trainers and Educators (www.IAATE.org) and served on the Board of Directors from 1997-2009. She volunteers her expertise to support conservation projects, The Kakapo Recovery Program and the Bird Endowment. In her career she has trained animals, trained staff, lectured and/or presented shows at over 40 facilities around the world.

Barbara has been a featured speaker on animal training in over twenty countries and has been published in nine languages. Barbara teaches learning theory as described by the science of behavior analysis. She is also passionate about teaching excellent animal training practical application skills. Barbara is thrilled to have had the opportunity to train thousands of animals, from rats to rhinos. This experience makes Barbara's expertise truly unmatched. This hands-on practice with so many different individual animals has been invaluable to helping her provide caregivers the tools they need to solve behavior problems and have a great relationship with the animals in their lives based on trust. Her goal is to leave behind a legacy of kindness to animals by sharing her expertise.

4:00pm–5:00pm

Presentations

Hall/Sal H-J

The Advantages and Disadvantages of Whole Carcass Feedings

Kirstin Anderson Hansen^{1,2}; ¹University of Southern Denmark, ²Odense Zoo

Whole carcass feeding often comes with a discussion or debate about animal ethics. Arguments are often that the public can't or won't understand, it is inhumane and unethical, or it is gross and disgusting.

In Odense Zoo, the carnivores are fed with whole carcasses every week. Horses, cows, and goats that are donated to the Zoo, or other animals that are culled from the Zoo's own population, are used during these feedings that occur during the Zoo's open hours so the guest can see and enjoy carnivore behavior.

More importantly, this kind of enrichment allows for the establishment of social behavior, social hierarchy, stimulates hunting behavior, and provides excellent physical stimulation, as well as the nutritional benefits.

In the presentation I would like to present the advantages and disadvantages of whole carcass feeding and how the carnivores and guests are able to reap the benefits of this type of enrichment every day.

A Touching Experience

Ashleigh Clews, TBD; National Aquarium

Touch tanks and elasmobranch training are both hot topics in the public aquarium industry. This presentation discusses training methods employed with stingrays and skates acquired for a National Aquarium touch exhibit opening in 2015.

At concept development, there was a clear expectation that guests would readily be able to touch animals in an exhibit that supported exceptional animal health. Staff identified deliberate respondent and operating training pre-opening as critical to meeting these goals. Purposeful training was identified as the only way to increase the likelihood animals would voluntarily participate in touch interactions. Multiple staff members from quarantine, animal programs, veterinary, and husbandry groups were involved in training approximately 25 animals over a period of 18 months.

In the shallower tray systems, techniques included staff putting hands in water during feeding and offering food by hand. Most animals readily approach hands, touched hands, and permitted acceptable levels of tactile interaction without detailed positive reinforcement training plans. For animals that did not meet behavior goals, more detailed plans were utilized.

In the deeper holding systems, target training with artificial hand targets was used. Additional work with one ray in particular has focused on the goal of training this ray to swim onto a platform, be lifted towards the surface and stay on the platform while being touched.

Challenges included staffing levels/training experience, quarantine/medical needs and enclosure access. This presentation focuses on how these challenges have been addressed, the training methods employed and the animals' progress on each of these training goals.

Training of American Alligators in Randers Tropical Zoo

Birgitte Pedersen; Randers Tropical Zoo

When I in 2010 was given the responsibility of the American Alligators in Randers Tropical Zoo, I had absolutely no experience working with these animals. Therefore I was trained by experienced keepers, who taught me to work with them in "the traditionally way". By this I mean, looking at them from a distance, throwing some food in the water, where the alligators could fight for it. If a medical check or a shipment to the veterinarian were necessary, the normal procedure would be to catch them by jumping onto them and restraining them.

At some point, I thought there must be another way. Therefore, I started station training them, to be able to work with one individual at a time, giving me the possibility of medicating them. The biggest goal was getting them to go on shore voluntarily, and into a transport box, so I could move them safely and exercise them at the same time. All this to make the general management less stressful and safer for the animals as well as the keepers.

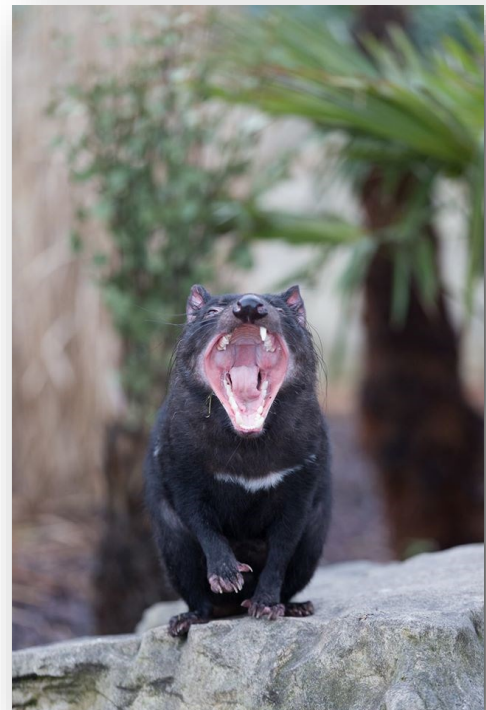
I would like to show and tell about the process, thoughts, challenges, problems etc. from the beginning until today, where three out of five animals can go on land, into a transport box and back into the water. Many people don't believe that you can train a reptile and work cooperatively with them. I would like to show them otherwise.

6:00pm–7:30pm

Silent Auction

Buffet and cash bar

Hall/Sal A-C



Daily Schedule

Wednesday, April 15th



7:30am	Depart Copenhagen Zoo	Hotel Lobby
10:00am	Arrive at Copenhagen Zoo Lunch and dinner provided at the zoo	
12:00pm-1:00pm	Lunch and Member's Business Meeting	
5:30pm	Depart for The Blue Planet Meet at the zoo entrance	
6:00pm-9:00pm	Poster Night at The Blue Planet Snacks and drinks provided	

Zoo and Technical College Unite, Creating Enrichment Devices

Marc Alcott and Katrine Friholm; Copenhagen Zoo

Creating new/improving enrichment devices as a keeper is a constant never ending challenge. Quite often the ideas for new constructions come to mind at all hours of the day, and only our imagination (and budget!) set the limit for what is possible. For some keepers, the ideas are there, but the lack of skill and craftsmanship means it will never be realized.

We, Katrine Friholm and Marc Alcott (Copenhagen Zoo), sat down discussing the possibility of cooperating with the local Technical College in town, where blacksmiths, welders, electricians and graphic print artists are trained. At the college they are given different assignments, as part of their training, so we saw an opportunity to make the most of that. We offer them a change of scenery, giving them an assignment in our zoo, creating an enrichment device from a sketch created by both parts. We supply the material, or pay for it, and they create it back at the college.

This collaboration is an advantage for both parts, as the students at the technical college are challenged with new and exciting assignments and the zoo is able to produce more advanced enrichment devices, otherwise not likely to be done on our own term, often due to time and skills. There are no limits to what they will take on as a challenge to create.

For my poster I will present how we had a simple, yet effective, insect feeder for our tamarins, created, also show two other projects in the making.

Changing Animal Handling 180° in the Education Section at Copenhagen Zoo

Anne Christensen and Sigyn Ørum-Rasmussen; Copenhagen Zoo

Historically in many Zoos, handling animals used in education programs involves grabbing the animals quickly in their enclosure –sometimes even in their hide, and exposing them to a lot of stress, during handling and even restraining them in front of students. This has, for many years been accepted because of the bigger and important purpose: teaching the next generations about animals, nature etc. In our education section, we have many smaller animals, some can be aggressive, and others try to escape or freeze when stressed. Until recently these animals were forced into participating in the classroom and not rewarded for it.

After observing the education programs we have made some changes, regarding how to get the animals from the enclosure and in to the classroom, but also during the handling in the classroom. The first two species to get a new management plan was the guinea pigs and the ferrets. A big part of the change involves positive reinforcement training, with the goal to get the animals to participate voluntarily in the education program. Also this has eased the daily husbandry in our section. It has also given us the option to teach children and adults about a way to increase the welfare of their pets at home.

Last but not least the welfare is on a higher level, the daily stress of being captured, restrained and forced in to the classroom is gone!

From Traditional Falconry to Training with Positive Reinforcement with Birds of Prey

Anne Christensen and Sigyn Ørum-Rasmussen; Copenhagen Zoo

After several years of training birds of prey the traditional falconry way, we decided to change it to training with positive reinforcement. The first step was to teach the birds to come to us on a given sign, and then reinforce them, rather than the old method where they were lured to the glove by showing them a piece of meat. The jesses and the bell was taken off the birds.

The risk of having a bird on the glove that is biting no longer exists. Training with this new method involves a higher risk for the bird to fly away if scared, because there is no jesses to grab.

To prevent having to grab and restrain a scared escaped bird, the birds were trained to go into a crate and to be transported if necessary. This is all done by training with positive reinforcement. In other situations such as beak trimming, we used to restrain the birds for trimming the beak; they are now trained to keep the beak still while the trimming is being done.

In conclusion, the bird is now cooperating with the trainers, and chooses to stay on the glove.

Gibbon Training – From Frightened to Trustful

Mikkel Famme, Hanne Petersen and Mia Eriksen; Copenhagen Zoo

In Copenhagen Zoo, we have four Lar gibbons: two adults (13y + 14y) and two juvenile (5y + 1y). The parents arrived to CPH Zoo in 2005 and the female was scared of zookeepers and indoor enclosures; she wouldn't stay inside whilst we were there. In the first 12 years of their time at the zoo, they have had three different enclosures and zookeepers entering all of them to clean and feed.

The Training:

In November 2013, we moved them to their current enclosure and changed to protected contact. In 2014, we started hand feeding them outside - through the mesh and later moved this session inside on a training-wall.

In the beginning, we only had contact with the adult male and the larger juvenile and trained them by setting rewards on the training-wall for them to get while we were close. We could easily hand feed them after few sessions. We did not see the female and her young inside whilst training until after 2 weeks. She started sitting in the door, farthest away from us, and then slowly moved closer towards us every training. We filmed the sessions, so we could show each other the progress.

Now we can hand feed her too and the indoor enclosure is the whole group's safe place. Soon we can start

introducing bridges and reward training. The only problem we have now: The female is very dominating and wants all the rewards to herself.

An Education Focusing on Animal Behaviour

Malene Friis Hansen and Pernille Bjerre; Roskilde Technical College

Roskilde Technical College (RTS), Denmark holds an outstanding education in animal care, respected and accepted worldwide. The education, Animal Keeper Specializing in Zoological Facilities focuses on increasing captive animal welfare through behavioural observations, enrichment, and training. Students are encouraged to dig deeper into the subject of animal keeping, teachers are well-educated, and specialists from the field are often giving talks. Visiting zoological facilities around the world are a main focus to ensure students are up to date and on the frontline of animal care.

Many subjects are taught to provide a holistic approach to animal care. Animal Behavior is a key subject in this approach. Focus here lies on becoming knowledgeable on basic, innate and learned behaviours for all vertebrate groups, as well as learning how to observe behavior. The subject Enrichment also contains a theoretical as well as a practical approach. Focus here is on creating, implementing and evaluating species-specific enrichment. Training provides students with invaluable skills in behavioural management. Everything taught at RTs must be directly transferable to the work of the students at their apprenticeships, and later on in their employment.

RTS has been educating animal keepers for several years, and now has animal keepers at zoos and aquaria all over the world. RTS holds other educations and also teaches individual courses, such as ZIMS. RTS is actually the first institution in the world outside of ISIS to provide an ISIS approved ZIMS certificate course.

Behavioral Study in Weedy Seadragons (*Phyllopteryx taeniolatus*)

Susan Schødt Lynge and Cecilie Grønlund Clausen; National Aquarium Denmark

A behavioral biologist, Cecilie Grønlund Clausen, and I, an aquarist at National Aquarium Denmark, have over a 3 month period worked on basic behavioural study on weedy seadragons. The study looks at behaviours such as hunting, displacement, movement, and other more species specific behaviors. We have also looked at the respiratory rate over the full period, to get an idea of when a seadragon is calm, stressed, and how long it takes for it to settle down after changes have occurred to its environment. We have also looked at the weedy seadragons placement within their tank, and if their placement can be influenced by changing the placement of the plants; this should improve the visitor's experience without compromising the sea-dragons well-being. Finally the last 2 weeks of the study we introduced seven juveniles to a tank of three adults.

On top of that I, Susan, have carried out a 2 week similar study at Aquarium of the Pacific, USA (November 2014) and at California Academy of Sciences, USA (December 2014).

This appears to be the first real behavioural study on weedy seadragons in captivity, so it should provide a foundation for further studies within this weedy seadragon field.

Training Two-Toed Sloths, Using a Set of Bells

Christian Ørsnes; Copenhagen Zoo

At Copenhagen Zoo, we have three Linnaeus's two-toed sloth, housed in our tropical house where they are free range. Being a popular attraction for visitors to see, people unfortunately spend much time trying to lo-

cate them in the trees, but are faced with the challenge of spotting the animals high up in the canopy well hidden in the dense foliage. Correspondingly, the keepers are also challenged when having to locate them for the daily visual checkup, or if a trip to the vet is needed. As a result of this, the keepers have begun training the sloths to descend from the trees, when a bell is rattled in the tropical house by the keepers.

The aim is to improve the visitor experience greatly, as they get to see these amazing animals on a closer level, but it would also become an important element for the keepers, offering a close checkup of the animals on a regular basis, thus heightening the daily care of the animals.

Enrichment at the Elephant House

Holger Wisbøl; Copenhagen Zoo

I would like to present some of the objects we use as enrichment at the elephant house.

It would be a poster with lots of pictures and descriptions of the various objects.

Meant as a means to share and get inspiration about enrichment.

Examples are different kinds of feeders, sand mounds, blue plastic barrels and so on.

The Two Faces of the Medal: Animal Training and Welfare in Ring-Tailed Lemurs (*Lemur catta*)

Barbara Regaiolli¹; Consuelo Scala²; Caterina Spiezio¹

¹ Research & Conservation Department, Parco Natura Viva – Garda Zoological Park, Bussolengo (VR), Italy.

² Department of Biosciences, University of Parma, Parma, Italy.

Nowadays, training is widespread among modern zoos and represents an optimal way to improve animal care and management. Despite the evidence that training is beneficial for animals and caregivers in daily husbandry and research, few studies considered the implications of training on animal behavior and welfare. This research aims at investigating the effect of a temporary isolation training period on the behavior of a captive colony of ring-tailed lemurs (*Lemur catta*) housed at Parco Natura Viva, Italy. Each lemur was gradually required to enter a training area and retrieve rewards in isolation from conspecifics. Data about individual and social behaviors as well as performance and reaction to the trainer requirements were collected before, during and after the training period. A continuous focal animal sampling method was used. Results of this study underline that each lemur seems to respond differently to the training in terms of stress level, time necessary to get used to the new situation and task acquisition. However, the stress level displayed during the training sessions disappeared outside the training area. Furthermore, since affiliative behaviors were displayed more after the training sessions, training seems to be enriching for ring-tailed lemurs. This study highlights that training could be an optimal strategy not only for animal management and research but also for psychological well-being and social cohesion.

Providing New Opportunities for Hand-Reared Chimpanzees: Integration into a Social Group

Caterina Spiezio¹; Barbara Regaiolli¹; Martina Girardi²; D. Frasson^{1,3}; P. Accorsi²

¹ Research & Conservation Department, Parco Natura Viva – Garda Zoologica Park, Verona, Italy

² Dipartimento di Scienze Mediche Veterinarie, Università degli Studi di Bologna, Italy

³ Conservation Manager, Tacugama Chimpanzee Sanctuary, Sierra Leone, Africa

To provide the opportunity for normal species-specific behaviours, captive chimpanzees should be housed in social groups and the introduction of new social partners could be useful to reproduce fission-fusion social organization. In particular, hand-reared chimpanzees should be introduced in a social group in order to perform species-specific behaviours. Behavioural research on integration procedures and on the acceptance of hand reared-chimpanzees by the group is needed.

The aim of this study was to assess the behaviours of a colony of chimpanzees, housed at Parco Natura Viva (Italy), during the introduction of hand-reared individuals. A focal animal continuous sampling method was used to collect data about individual and social behaviours of chimpanzees. Forty eight 10-minute sessions per subject were run. Results underline that all chimpanzees performed species-specific individual and social behaviours; in particular, the hand-reared individuals displayed affiliative behaviours toward conspecifics such as social play, grooming and approach. Finally, the behaviours displayed by the hand-reared chimpanzees seem to indicate that they adapted well to the new group as the integration progressed. In conclusion, the hand-reared chimpanzees seem to be successfully integrated into the group by engaging in positive social interactions with all group members.

Shark training at Kattegatcentret

Rune Kristiansen; Kattegatcentret

Since the spring of 2011, Kattegatcentret has dedicated time to train our three bottom dwelling sharks – two nurse sharks (*Ginglymostoma cirratum*) and one zebra shark (*Stegostoma fasciatum*).

The three sharks are trained to come and lie at defined individual stations on a plateau in shallow water during the daily training session.

Besides daily health care checkups, one nurse shark has also been trained to turn around on its back on command making examination of abdomen accessible.

The training has given many possibilities of both management and proactive health care and is also part of the public daily shark feeding.

9:00pm

Depart for the hotel

11:00pm

Arrive at the hotel



Daily Schedule

Thursday, April 16th



7:30am - 8:00am

Registration

8:00am – 9:20am

Keynote Speaker

Hall/Sal H-J

Africa's Savannah Elephants in a Changing World

Rudi van Aarde; University of Pretoria

Indecision driven by differences of opinion and a lack of knowledge on how to protect and manage Africa's elephants is at the core of conservation conflict. In general supporters of the intrinsic value of nature wish minimal interferences, while those lobbying for economic gains for society argue in favour of extractive uses such as trade in ivory and trophy hunting. The latter often also calls for the control of elephant numbers through culling, while the former wishes conservation to rely on natural processes with minimal interference from people. At the stake of this conflict is the well-being and persistence of Africa's elephants, especially in the wake of habitat loss, political conflict, improper governance and other criminal activities and the consequences that climate change is holding for elephants.

Scientists also disagree on how to best conserve elephants and other species in a changing world. Their disagreements unfortunately play into the hands of political indecision and the consequent application of political agendas that, for instance, plague CITES and related efforts of many NGOs to contribute to the conservation of elephants and other species valued by society. Despite these disagreements elephants continue to dominate protected areas across most of sub-Saharan Africa. Here they symbolize conservation successes and failures, act as keystone species, modify and maintains savannah vegetation and related ecosystem functions, contribute to regional and local economies and come into conflict with people. Their future hinges to some extent on our abilities to cater for their needs. To do so we need to know how elephants will respond to the changing world we are living in. Our interpretation of their responses to habitat loss, conservation management interferences natural ebbs and flow of living conditions and climate change therefore make conservation sense, especially when founded in ecological principles that relates to the interactions between species and their environment. I therefore will present our findings based on some 20 years of research on free-ranging elephants across several southern African countries and use behavioural, physiological and ecological information gained through active field research to evaluate individual, population and meta-population responses to prevailing and predicted living conditions with emphasis on the influence of people, management and climate change on the future well-being of elephants.

Professor Rudi van Aarde chairs the Conservation Ecology Research Unit at the University of Pretoria and has built up an enviable reputation over the years for his contributions to zoology, the author or co-author of 185 peer-reviewed scientific papers, 12 book chapters, a plethora of technical reports and popular articles, and has presented his research findings on some 200 occasions at national or international conferences and public forums, several of these as invited speaker or guest lecturer. In South Africa he has been a forerunner in the development and promotion of conservation and restoration ecology. His impact on the above fields can be attested to by the large number of invited lectures he has been requested to present all over the globe.

His research on elephants, with emphasis on finding solutions for the causes rather than symptoms of so

called 'elephant problems' commenced in 1991. This research is continuing to this day and conducted across gradients of environmental and management conditions in southern African protected areas in Mozambique, Malawi, Zambia, Botswana, Namibia and South Africa. His development of the 'megaparks for metapopulations' concept is an innovative platform for elephant conservation and places emphasis on the spatial structuring of populations and their responses to varying supplies of environmental resources.

9:20am-9:40am

Presentations

Hall/Sal H-J

Utilizing Enhanced Desensitization Techniques with a Pack Of Beagles (*Canis lupus familiaris*)

Heather Samper; Mutts with Manners

In several desensitization definitions, exposure to the aversive stimulus and subsequent reinforcement are the common components to overcome fear. There is more to desensitization than teaching an animal to cope with an unfamiliar or aversive stimulus. The goal of this presentation is to expand upon the current desensitization techniques (exposure and reinforcement) to encompass a more holistic communication experience for the animal. As training evolves to focus on giving animals more choices, so should our communication with them. When teaching a pack of beagles to become non-reactive to a team of horses, multiple facets of desensitization techniques such as exposure, motivation, communication, timing, body language, choice, trust, and reinforcement all came into play. Each of these facets will be discussed to explain their importance in the role of expanding trainer knowledge of desensitization techniques. Finally, teaching the concept of generalization crowned a successful training goal thereby increasing confidence in a once scared pack of beagles.

Break

10:00am-12:00pm

Presentations

Hall/Sal H-J

Influence of Positive Human-Animal Relationship through Positive Reinforcement Technique on Behavior and Adrenal Activity of Chinese Leopards (*Panthera Pardus Japonensis*) and Snow Leopards (*Uncia Uncia*)

Aude Bourgeois, Amandine Puaux, Juliette Roos, Muriel Kohl, Norin Chai; Muséum National d'Histoire Naturelle

Most studies suggesting that human-animal relationship has an impact on animal welfare, focus on farm animals. This study aims to assess the influence of positive human-animal relationship through positive reinforcement training on behavior and fecal glucocorticoid levels in two species of captive felids. The behavior of a male and two female Chinese leopards (*Panthera pardus japonensis*) and a male and a female snow leopard (*Uncia uncia*) was monitored during 6 months. Concentrations of fecal cortisol metabolites were determined by enzyme immunoassay technique. First, we measured the influence of the visitors and keepers on the felid's behavior and adrenal activity. Second, we examined the variation of these indicators after the establishment of a training program.

Negative behaviors (vigilance toward human, fear, stereotypy and agonistic behavior) significantly increased in all subjects, as noise levels and movement of the crowd increased. We found no significant effects of crowd size or public density on the behavior of the animals. Evenly, negative behaviors increased with negative or neutral keeper-animal interaction.

The positive reinforcement training had a number of positive effects on behavior and fecal glucocorticoid level. Negative behaviors tended to decrease and we observed a significant increase in positive behavior in the presence of keepers. There was a significant difference in fecal corticoid concentrations before and after the training implementation except with one female snow leopard which was under treatment for health matters during the study. These findings indicate that keeper-animal relationship can improve the welfare of captive

felids.

Eradicating Fear and Anxiety of Confinement, With Hamadryas Baboons

Marc Alcott; Copenhagen Zoo

For years on end, the approach to the daily management of Copenhagen Zoo's troop of hamadryas baboons (*Papio hamadryas*) has been a dispirited routine, involving the practice of threats and enticement, when moving the troop from point A to point B, and/or when a sedation of an individual was scheduled. It's common knowledge, that this would not be tolerated today, especially with all the knowledge available. Nonetheless, this was the starting point for us, as our animal trainer coordinator Annette Pedersen and the primate keepers at Copenhagen Zoo began a 2½ year (and pending!) journey, to eradicate all negative associated behavior, imprinted within the baboons for many years, leaving them with zero trust, in us keepers.

The challenges of remote training a troop of baboons, asking of them to enter an enclosure, being locking in a confined space where absolutely all possible negative relation is associated with, is what has been the challenge and time consuming operation we have undergone. Being tested several times a day on our training skills, has been the motivational factor for us all. We've hit rock bottom on several occasions, come across unthinkable obstacles and committed all possible mistakes, and that's what has motivated us to keep improving on the baboon training twice a day, every day for almost 900 days straight now.

Training the baboons has tested our knowledge on the fundamental issues of training, but along the dozens of unimaginable obstacles we encountered, we've gained skills and experience, not found in any books.

Positive Reinforcement as a Replacement of the Antique Training Methods at Elephant Camps in Asia

Gerardo Martinez and John Roberts; Golden Triangle Asian Elephant Foundation and Africam Safari

In many Asian countries, the elephants have been trained to do, among other things, strenuous physical work and to participate in the tourist and entertainment industries. Furthermore, the training that they have received for these tasks has always been a subject of discussion because of the aggressive methods often used.

The "mahouts", whom are the people that handle the elephants, have ancient training methods that have evolved not only for dangerous free contact, but mournfully in the necessity to sometimes impose certain degree of firmness and roughness directed towards the elephants. What is surprising though is that this practice of intimidation has not changed throughout the years despite the long list of injuries and fatalities of mahouts, passersby, and elephants alike, arguably attributed directly to the use of these practices.

That is why The Golden Triangle Asian Elephant Foundation in Thailand, has been teaching mahouts from Thailand, Laos and Cambodia in how to handle their elephants through the use of safe and harmless methods and how to convince the elephants to cooperate voluntarily without being threatened or harmed in order to receive the proper care they need. The most difficult task of this "Positive Reinforcement Project" has been to convince the mahouts, whom are talented and with invaluable skills, to let go of the practices they have been taught and have been following for many centuries. Nonetheless, many of them have been very receptive of our work, and we have achieved remarkable results with both, the mahouts and their elephants.

A Birds' Eye View- A Breakdown in Relations between Parrot and Caregiver

Elaine Henley, Animal Behavior Clinic

The keeping of parrots as companion pets is rapidly growing in popularity, and they are often perceived to be a pet that is easier to care for than a dog – after all, you don't have to take a parrot for a walk, right? All too often, the purchase of a parrot is an impulsive response to the media's bombardment of the public with images of exceptional parrots -- real or animated—who converse, dance, sing, perform tricks, and relish being petted and snuggled by their caregivers. As a consequence, caregivers' expectations are often raised to unrealistic levels, and disappointment ensues when the reality of parrot keeping does not match caregiver expectations. Many caregivers are disappointed when they have relationship issues with their parrots such as extreme vocalization, handling problems, destruction of property, and aggression directed toward them, the caregiver – the provider of food and adoration.

Parrot caregivers are more likely to tolerate lesser-perceived problems, such as destruction and noise, when they have either formed a tactile bond with their parrot or the parrot's aggression toward them is minimal. Caregivers often approach their relationship with their parrot from a human perspective, rather than from one which is natural to the parrot.

This presentation will explore the differentials for aggression directed toward the caregiver and household members. Information and analyses provided will be comprehensive and include the consideration of parrot ethology and flock behaviour, while emphasizing the need for an individualistic behaviour modification and training resolution.

Seeing the World through Behavior: The Challenges of Using Operant Conditioning to Train Chinchillas to Voluntarily Participate In Educational Programs When There Are More Than 50 Animal Handlers

Christina Lavalley; Zoo Atlanta

Zoo Atlanta has an active education program with over 50 educators trained to handle all the tractable collection. When a new animal is acquired, keepers spend time ensuring the individual will be comfortable in its new role as an animal ambassador. When keepers think the animal is ready, they begin training education staff on proper handling and presentation. In 2012, chinchillas were removed from the collection due to their inability to adapt to the animal ambassador role. In 2014, new chinchillas were acquired. A training program was started with the animals to teach them kenneling and a consistent type of handling, which would empower this normally flighty animal to succeed in its new role. Each animal had their own personality so training progressed quicker with some while others lagged behind.

We selected two individuals to focus on, with an early 2015 goal as a date to begin educator training. In order to minimize stress, trainings were offered two times a day with a maximum of six educators. Keeper staff demonstrated all aspects of the trained behaviors and were present while the educators practiced. When the animals chose not to participate, educators still practiced with empty kennels to develop mechanical skills. In March 2015, these two individuals should be able to go on programs, seeing the world after handler training is completed. The other chinchillas continue to make steady progress and will be able to travel when they are done with training, without additional staff training.

Let's Get Physical

Valerie J Hare and Mark Kingston Jones; The Shape of Enrichment, Inc.

Environmental enrichment, as a concept, is now well recognized as an important consideration in the welfare status of any captive animal. The behavioral, psychological, and physical benefits of enrichment are well documented.

Since the early days of enrichment, many have touted its benefits for physical health, usually through increased activity. While surely beneficial, we believe that the more common enrichment strategies used to encourage activity today do not provide the animals with opportunities for appropriate types or sufficient levels of exercise.

We have an ethical responsibility to provide all animals in our care with good physical, psychological, and behavioral health but also with good physical fitness. And for animals destined for reintroduction, it is imperative that each animal possesses the requisite strength, sense of balance, and fine motor control to survive and succeed on its own.

Thus, we propose that animal enrichment programs include strategies designed to address these needs and we will present examples of such. But, as with all enrichment, we encourage animal care professionals to continue to develop new strategies geared toward providing opportunities for appropriate types and levels of exercise.

12:00pm-1:00pm

Lunch

1:00pm-2:00pm

What's The Motivation?

Hall/Sal H-J

Steve Martin; Natural Encounters, Inc.

In this presentation, the construct of motivation will be explored. A motivated animal is operationalized as one who engages in the training dialogue with quick response to discriminative stimuli. Historically, force and coercion were the tools used to motivate animals in zoological settings and even some birds performing in shows. Fortunately, those methods are being replaced with more positive approaches. But, even with the current ground swell of positive reinforcement training in the zoological field, there is much mythology and poor training practices surrounding the need to motivate animals. These include putting the blame on the animal, misrepresenting scientific principles, as well as lowering animals' weights to unacceptable levels. Fortunately, there is an emerging technology based on antecedent arrangement and positive reinforcement that allows trainers to successfully work with highly empowered animals. Key components of this technology include sensitive reading of body language, high rates of reinforcement, and clear communication of criteria. With these components, welfare is increased as animals learn to use their behavior more effectively to gain positive reinforcement.

Break

2:00pm-2:40pm

Presentations

Hall H-J

Decreasing Different Kinds of Aggression Using the "Stress Triangle"

1) František Šusta 2) Gabrielle Harris; 1) Prague Zoo, Czech Republic 2) South African Association for Marine Biological Research, RSA

In 2014 we published the "Stress Triangle – The Four Questions for Which Animals Need an Answer" (Wellspring 14/2). This system, which protects the trained subject from distress during the training process, is relevant not only when desensitizing subjects to 'scary' things, but also in a wide application of posi-

tive reinforcement training situations. In summary; the animal needs to have answers to four standard questions to ensure that their learning remains choice-based. This prevents them from becoming distressed. The questions are; 1.WHY do I participate in the training? 2. How can I STOP the training from happening? 3. Where is my SAFE PLACE to relax? and 4. How can I show the trainer I am ready to START work in the training session?

During the last year this system has been used to diagnose different causes of aggression in a variety of exotic and domestic animals. It has assisted to find appropriate solutions. We have found that the kind of aggression that we are dealing with influences the design of the solution process. In the paper we present different case histories where there have been different motivations for the aggression and illustrate how we used the stress triangle to diagnose the concerns. We will outline solutions that were implemented. Types of aggression we will look at include fear, defensive, predatory, and learned. In conclusion we will discuss how aggression can be the result of the inappropriate use of a schedule for reinforcement.

Training for the Unexpected: Offsite Free-Flight Programs

Cathy Schlott, National Aviary

The National Aviary has incorporated free flight programs into their off-site offerings. Programs include educational outreaches to locations such as schools and visits to media. However, there are several factors to consider and challenges to overcome in order for each program to be successful – for the audience, the staff, and the birds. Difficulties may arise from unfamiliar or startling stimuli, the location of the event, and the demands and expectations of the client. No matter the challenge, a few basic approaches are the key to an effective off-site demonstration. Things as simple as choosing the right bird, utilizing specific training techniques and acclimating animals to a wide variety of new objects and situations can make all the difference to ensure these outreaches are successful.

On top of the preparation for each unique situation and the trainer's dedication to the safety and comfort of both the birds and the audience, there is another crucial factor in a successful program: a lasting educational message. It can be tempting to rely on the spectacle and impact of seeing live animals, but it remains a priority to educate while entertaining. Achieving a balance between education, fun, excitement and safety during a live, free flight show is a challenge that cannot be underestimated. Bringing amazing animals into the lives of our audience can drive home important messages and leave lasting impacts. Creating unforgettable experiences for the audience is why preparation with the birds for any scenario is vital to having a successful off-site program.

3:00pm-4:00pm

The Power of Relationship- Forming and Maintaining a Valuable Motivation Tool

Dr. Jenifer Zeligs; Animal Training and Research International

Classical conditioning is the process by which something that previously had one value changes by repeated predictable association with something that has a different value. The relationship formed between the animal and the trainer (or the animal and the training system) is created through the process of classical conditioning. The process of relationship development is a very complex one since it is not usually just the result of a single associative event, but the cumulative result of all of the meaningful associations between any two individuals. The motivational value of the relationship as it is perceived by the animal is of great importance and potential value to the accomplished trainer since positive relationships can provide the marginally needed extra motivation to accomplish especially difficult and challenging goals. A positive relationship can bend 'no' into 'maybe' and turn fear into acceptance. This talk will discuss in detail the process of classical conditioning

and how the relationship is formed, as well as how to honestly evaluate every day choices of care and training to maximize this important motivational tool.

Jenifer A. Zeligs, Ph.D. is the owner of Animal Training and Research International which oversees a small teaching aquarium at California State University. She is the author of numerous articles and award winning presentations on animal behavior modification and its uses including her newly published book, *Animal Training 101: The complete and practical guide to the art and science of behavior modification*.

Dr. Zeligs has been working with animals since she got her start at the Smithsonian's National Zoo in Washington, D.C. while still in grade school. In that time, she has trained dozens of species of terrestrial and aquatic animals. She has also worked as a training consultant with exotic and domestic animals, as a veterinary technician, and with domestic and exotic animals trained to assist the handicapped. She has collaborated with and consulted for countless private and public facilities and organizations, and has trained animals for research, free release in the open-ocean, feature films and documentaries, public display and veterinary purposes. Dr. Zeligs has been featured in dozens of documentaries and television shows including National Geographic Explorer, the Tonight Show with Jay Leno, and Dateline, NBC.

Of all of her pursuits, Jenifer is most proud of her students, and finds the greatest joy in teaching and working with those passionate about their interests in conservation, animal care and training. Jenifer's students now work with and manage a wide range of animal programs throughout the world. Jenifer currently teaches at California State University, Monterey Bay and mentors students from all over the world in cutting-edge animal behavior and husbandry.

4:00pm–5:00pm **Committee Meetings** Hall/Sal H-J

This is your chance to get involved with ABMA. At the committee meetings you will have the opportunity to meet the chairs and discover if there is a particular committee that is for you. The committee descriptions are on page 43 of this program.

5:00pm–6:00pm **Program Council Meeting**

This is the meeting of all the committee chairs. All ABMA members are welcome to join us.

6:30pm–9:30pm **Career Night** Hotel Room 20-23

Are you looking to advance your career? Perhaps you would just like some interview experience without the pressure of a real interview. Come join our Education Committee as they host an informative night on how to advance your career. There will be reviews of your CV's and resumes by animal training professionals. To follow this up, you can participate in a mock interview.

6:30pm–9:30pm **Book Signing** Hall/Sal H-J

Animal Training 101: The Complete and Practical Guide to the Art and Science of Behavior Modification

Dr. Jenifer Zeligs

Finally, a single text on animal training that is truly all-inclusive, while still focused on nurturing the vital relationship between animal and trainer!

Animal Training 101, the first handbook of its kind, finally offers a complete marriage of the science of animal behavior and the practical art of animal training. In one comprehensive volume, this approach is presented in a simple and



practical way that will be useful to both the seasoned professional and a beginning level enthusiast working with animals of any species.

Where other animal training books focus on only a few chosen techniques, *Animal Training 101* thoroughly explains the entire spectrum of training methods. Dr. Zelig provides a cost-benefit analysis of each approach, while focusing on maintaining a trusting, positive relationship between animal and trainer. This well-organized reference enables you to easily find the optimal techniques to solve your specific training challenges and to decide which techniques best suit your individual needs. It is a must-have for anyone interested in animal training in either domestic or professional settings.

This text features:

- Both the science of animal behavior and the real-life practice of animal training
- Practical information useful to train both domestic and exotic animals
- Beginning and advanced techniques
- The most comprehensive and modern glossary of terms available
- Color illustrations

Author and professional Dr. Jenifer Zelig offers a flexible, complete, and pragmatic approach that will allow you to connect with any animal in a mutually satisfying way.

Elephants-A Way Forward

Rudi van Aarde

Foreward from the book:

"Issues surrounding the conservation, management and welfare of Africa's elephants are complex. We now know that elephant numbers in some populations have stabilized naturally, others are

increasing, while some populations are being depleted by escalating poaching and ongoing habitat loss. Where elephants are confined by fences, damage to vegetation is real, especially in small protected areas and around water sources. Human-elephant conflict due to crop raiding in areas where elephants range onto land where people live is another management concern. It is around these hotspots of contention between humans and elephants where calls to reduce elephant numbers, curb growth rates and reduce impact on people and on natural vegetation, continue to dominate, or rather, complicate, local discussions.

Arguments about elephant management are often extremely polarized. For instance, management to reduce numbers or to confine elephants solicits responses from people concerned about the welfare of elephants. While some interpret these concerns as 'animal righteousness' and support culling and hunting to control numbers, animal welfare and associated values should be part and parcel of conservation management decisions, i.e. management cannot be considered in a vacuum. At the end of the day, a concern for the welfare of individual elephants, populations and their habitats should be seen as a realistic and not idealistic management objective. While people sometimes are at odds as to the method employed to limit elephant numbers or their impact on other species, the majority seek the same outcome, a harmonious environment where elephants are not viewed as a 'problem'. All of these issues need to be addressed and this is where scientific research has a key role to play.



For the past 50 years many scientists have made a concerted effort to contribute to the scientific knowledge that may facilitate the well-being of elephants through appropriate conservation and management measures. This booklet is a further contribution to this effort. It should inform whoever is interested in elephants. The booklet is based on knowledge that Rudi van Aarde and his students, have gained through scientific research on elephants in southern Africa over a period of some 20 years. It has an element of advocacy and calls for the development of ecological networks to conserve elephants and to serve as frameworks for their management.

IFAW has partnered with the Conservation Ecology Research Unit (CERU) of the University of Pretoria on a research program aimed at understanding the dynamics of elephant populations in southern Africa. IFAW's interest in the conservation management of elephants in the region spans almost 20 years. Through dedicated support for research and practical solutions, IFAW aims to promote ethical and scientifically sound policy solutions to conservation management predicaments involving elephants.

IFAW trusts that its support of *Elephants – a Way Forward* will continue this important debate ensuring that all decision making on behalf of elephants is done with their best welfare at heart. – Jason Bell, IFAW, Director Elephant Program, Director IFAW Southern Africa”



Daily Schedule

Friday, April 17th



8:45am

Depart for Odense Zoo

Hotel Lobby

9:45am

Arrive at Odense Zoo

Lunch and afternoon coffee will be provided

4:15pm

Depart to Odense by boat

Odense Zoo Boat Dock

Free evening in Odense

All participants will receive a train ticket at the zoo for transport back to the hotel from Odense to Nyborg.



Daily Schedule

Saturday, April 18th



7:30am–8:00am

Registration

8:00am–9:40am

Research and Evaluation Workshop

Hall/Sal H-J

Promoting Good Zoo Animal Welfare, 24/7 across Their Lifespan

Sabrina Brando; Animal Concepts

Modern zoos have many roles to fulfill; conservation, education, research and recreation are often all listed in their mission statements. These different roles can be compatible as well as conflicting, when trying to meet visitor and animal needs. Not only do zoos have roles, but zoos also apply roles to animals, which may result in different welfare considerations. Although visitors and staff only spend a number of hours at the zoo, most animals are there 24/7, all year round, from birth to death. As wild animals in captivity are reliant on humans to provide conditions to meet their needs and wants, the absence of caretakers and other zoo professionals for two-thirds of the day is likely to impact on the choices available to the animals, and their perceived control. How do we ensure high animal welfare, 24/7, throughout the animal's lifespan and in relation to the role of the animal and the wider context? The impact of the various roles for zoos and animals, the variations across the day, week, month or year, and the absence of zoo staff for the majority of the day needs to be carefully reviewed to highlight areas in need of improvements in the way animals are housed and displayed throughout their lives. In this interactive workshop, you will be given exercises to map out the provision for animals you look after, from birth to death, and to discuss practical and feasible ways improve their welfare.

Sabrina Brando started her work with animals 22 years ago at the Amsterdam Zoo as a volunteer. Since then she has worked in many marine parks, zoos, research institutes, wildlife parks and in eco-tourism, with a large variety of animal species in Europe, the USA, Africa, Australia, South-America and Asia. Since 2008 she works full-time through AnimalConcepts as a consultant in animal care, welfare and rights, working in zoos, marine parks, animal shelters, government facilities, research laboratories and wildlife sanctuaries worldwide. Species ranging from rabbits, mice and birds to bears, snakes, crocodiles, dolphins and gorillas.

Sabrina has a BSc. in psychology (cum laude) and animal behaviour. She is currently enrolled in a MSc. of Psychology and a MSc. in Animal Studies. Sabrina is involved in several research projects on animal advocacy, welfare and behaviour. She also teaches workshops on care, welfare, enrichment, exhibit design, training and behaviour, the human-animal bond, animal learning and many other animal related topics for animal care staff, veterinarians, curators, students and managers as well as working with large teams as a consultant for multiple zoos, research facilities and universities worldwide.

Sabrina teaches as a guest lecturer on the MRes in Marine Mammal Science at the St. Andrews University in Scotland and teaches on the marine mammal summer course at the Húsavík Research Center at the University of Iceland. Through the IAT UK she teaches CPD courses on animal welfare and enrichment for laboratory animals.

Sabrina has authored and co-authored peer-reviewed scientific publication as well as book chapters, presented extensively and has been an invited- and keynote speaker at animal welfare and advocacy conferences worldwide. She is a reviewer for the journals Aquatic Mammals and Animal Welfare.

Sabrina volunteers for PASA (www.pasaprimates.org), traveling to Africa to work with great ape sanctuaries and reintroduction programs, as well as other animal welfare and wildlife voluntary work worldwide. She also travels to other countries world-wide to volunteer in conservation and animal welfare programs.

Break

10:00am–12:00pm

Presentations

Hall/Sal H-J

Winged Encounters: The Kingdom Takes Flight - A Macaw Story

Chris Jenkins, CPBT-KA; Arianna Bailey, CPBT-KA; Dan Blair; CPBT-KA; Natural Encounters, Inc.

Natural Encounters, Inc. (NEI) has lit up Disney's Animal Kingdom with daytime, living fireworks. Four times per day NEI flies 20+ macaws in a mixed species group about a half of a mile through the park where they land on a perch. There, guests get an up close look at the birds while learning about things like some of the conservation efforts going on in the wild. The encounter only lasts a few minutes and then in a burst of colors the birds are off to fly a half of a mile back to their large flight aviaries. This paper will help give insight into the huge undertaking of putting together this encounter. From hand raising these birds to their first step-ups and to flying outside and flying long distances with no line of sight in large flocks, this has been an extremely intensive process. The team at Winged Encounters has learned so much from this experience and continues to strive to learn more and better the project every day. Throughout the paper you will learn the ups and downs and the triumphs and mistakes the trainers and the birds have made as a team while sharing a conservation message that strives to inspire conservation action in the guests that witness this amazing experience.

The Pros and Cons of Stress

Karen Frost; Hund & Træning (Dog & Training)

Stress is often thought of as something that is bad for you. If we take a look inside an individual, there is no doubt that stress can be detrimental to both the body and the brain. High levels of stress hormones can affect different tissues and do damage, e.g. depress the immune system, elevate blood pressure and do permanent damage to brain tissue. This kind of stress is often caused by fear but it can also be created by frustration and expectations. When we clicker train our animals, we can accidentally create stress-related problems because we use the technique incorrectly. Clicker training can lead to frustration when the animal cannot solve the puzzle of how to get to the reinforcer because we as trainers do not provide enough information to the animal on how to gain access to the reinforcer. We can also create stress if we build too much expectation into our training sessions or other activities. This kind of stress is just as adverse although the animal seems to be having fun. Stress, however, is not always harmful. We have to remember that individuals that could produce a stress response have had an evolutionary advantage to those that could not. We see this in the fact that the stress response can be seen across a variety of species. It is also worth noting that low levels of stress hormones actually can enhance both the acquisition and performance of behaviors.

The Long & Winding Road: Turning Over a New Trainer on a 6 Year Old Blind 1.0 Fossa

Larissa Comb; San Diego Zoo Safari Park

The AZA Small Carnivore TAG recommends that the fossa (*Cryptoprocta ferox*) not be used as an education animal (AZA Small Carnivore TAG recommendation, 2004). As the largest carnivore of Madagascar, the fossa is an extremely strong and aggressive predator making them very challenging to work with free contact. For this reason it is not surprising there are only two working fossa ambassadors in the entire United States. While the ferocity of the fossa creates its own set of problems, one less obvious issue with the species in a large, dynamic training department is turnovers. The Wildlife Discoveries division of the Behavior Department

at the San Diego Zoo Safari Park works with 40 individual ambassadors representing 21 species. With only nine full time trainers, an animal must be tractable and able to work with multiple individuals in order to be successful. When 2 of his 5 trainers left the department in 2012, it became imperative we focus efforts on introducing another trainer to our fossa "Jamba". Given Jamba's history of aggression towards new people and one previous unsuccessful turnover, this would be no easy task. Complicating the situation further was the fact that Jamba is almost completely blind. This paper will discuss the steps taken over the course of 2 years that ultimately lead to the successful addition of a new trainer to Jamba's training team.

A Winning Formula: Education and Enrichment

Mark Kingston Jones; The Shape of Enrichment, Inc.

Education and Enrichment are both vital components of a good modern zoological collection. Evidence is growing that interest is prolonged through seeing active 'happy' animals, while seeing negative behaviours can detract from education and conservation messages. With this in mind it makes sense to combine these two aspects to maximize the development of both.

Conducting hand/stick feeds during public talks is an easy method for increasing talk attendance and prolonging stay time, as people get a closer view of an active animal. The question remains however, what message is being taken away from these talks and whether it is the educational information that remains or the image of 'tame' large exotics being fed by their keeper.

By substituting hand feeds with enrichment demonstrations we can still increase visitor numbers and stay time, while aiming to ensure the intended educational messages are delivered through the display of appropriate behaviours. Additionally by developing enrichment that can be used for public talks, further investment in animal welfare programmes is encouraged. This presentation therefore aims to focus on methods, which maximize visitor interest and good welfare. Examples for how this can be achieved will be provided and suggestions for future research areas will be offered.

Extended Presentation

What Applied Ethology Can Contribute To Animal Behaviour Management

Karolina Westlund, ILLIS Animal Behaviour Consulting

Animal Behaviour Management (ABM) typically refers to training and enrichment strategies with the goal of improving captive animal welfare. In this lecture, I will give an overview of Applied Ethology – the application of ethology to animals managed by humans, and how insights borrowed from this field may improve training and enrichment implementation. As an ethologist tasked with managing behaviour, I would ask: what types of behavioural adaptations can I expect from this species, given its ecological niche, habitat and social structure? Which of those are important to the species in question and should be prioritized, to minimize distress and maximize welfare? In my experience, three issues are particularly important from this perspective: the typical social structure and dynamics of the species, their foraging strategies and anti-predatory behaviour. Identifying and catering for behavioural needs is another use of Applied Ethology. In addition, this scientific field may provide unique insights into the prevention of maladaptive or malfunctioning behaviour, as well as addressing learning predispositions.

Most often, it is unfeasible to recreate the natural habitat and range of an animal managed by humans. Instead, we must create a functional simulation of the living quarters of that species, a main focus being to optimize welfare. The science of Applied Ethology may assist in asking the right questions and focusing on the key

issues. It is one theoretical framework, among several, on which practical enrichment strategies, and to some extent also training decisions, may be pinned.

12:00pm–1:00pm **Lunch**

1:00pm–2:40pm **Presentations**

Hall/Sal H-J

Implementing Choice and Control at the Chimpanzees in Copenhagen Zoo

Mikkel Famme; Copenhagen Zoo

Background:

Often zoo animals and also our chimpanzees have no control of their environment. Before we implemented the new management, we had to lure our chimpanzees by feeding them in the exhibit we wanted them to enter, this often failed. We have an artificial rain system, which is controlled by a computer. We listen to music while working, because we like it. We choose the food they eat. A lot of management and environment things, which the chimpanzees doesn't have control over.

Implementing:

First we changed our management; we now 'ask' the chimpanzees to leave an exhibit, and if they all exit – we reward them after closing the gate. If they try to run back, while we are closing – we reopen the gate and start over. They choose if we can enter the exhibit we request. The next step was a button where the chimpanzees could turn on the artificial rain, they now had the control of this. Latest invention is an ON/OFF electrical button where multiple things can be plugged into; radio/music, fan, light, etc. – they decide if it's on or off. This gadget will let the chimpanzees choose if they really want to watch TV, listen to music or have the light on or off – all decisions take for them, and sometimes think they like.

The future has more changes to come, more control of their food, substrates and bedding material and also control/interaction of/with the visitors.

My Taxi Ride

Jen Hickman, Denver Zoo

After 16 years as a zookeeper, I felt that I was confident and successful in my training techniques with a variety of species. However, my world was turned upside down when I adopted an American Bulldog mix named Taxi in July 2011. When I adopted him, he was a sweet boy who according to his foster mom had a tendency to get "spun up" with bursts of uncontrollable energy. Two weeks after bringing him home he attacked another dog while on a walk. A few days after that the vet deemed him unsuitable to be in a household with children. This was a major issue because I have two daughters, then 10 and 7 years old. After seeking out a behaviorist, Taxi was termed "reactive and fear aggressive." As a trainer, I felt I could handle this. I had experience working with aggressive species. My plan was to simply apply those skills to Taxi. However, I learned that it is a whole different ball game when the safety of your family is involved. For two years I consulted with zoo peers and a few dog training peers and made slow progress with Taxi. After Taxi attacked an off leash dog that ran up to him, I hired a professional dog trainer. Now Taxi is the center of my world. We are currently traveling this training road that has merged zoo and dog training worlds together and are doing so successfully.

Can You See Me Now? How About Now?: A Collaborative Effort to Increase On-Exhibit Visibility of 1.1

Lions at the Oakland Zoo

Heather Paddock and Erica Calcagno; Oakland Zoo

After the loss of Oakland Zoo's four elder lions in 2010 the ~1.5 acre exhibit was now very spacious, had plenty of resting places, and often had the two remaining lions "out of view" for the general public. By 2013, after many guest complaints, it became clear that something should be done to increase the visibility of Oakland Zoo's remaining lions. Rather than struggle through such a huge endeavor alone as an individual keeper or string, the Lion Team took a different approach. A major collaborative brainstorming effort was undertaken with the support and involvement of multiple Zoo departments from the President & CEO, to PR and Marketing, to the entire Animal Care Department. This concerted brainstorming effort has produced over a year of productive project ideas. Simultaneously, a behavioral observation project was implemented to ascertain how often the lions were "not visible" and if the lions were adhering to a roughly naturalistic behavior pattern. This observation project took advantage of Oakland Zoo's established intern program. In considering the brainstorming results and observational data it was important to balance guest interests vs encouraging natural behaviors and to have any management changes accomplish both these objectives. Major management changes do not have to be on the shoulders of a single keeper; the process can be collaborative and integrate ideas from individuals with a variety of backgrounds and knowledge bases. Both keepers and their animals can benefit from an open and collaborative approach to management.

Through The Lizards Eye – A Behaviourist Approach to the Diagnosis and Treatment of Behaviour Problems in Companion Lizards

Danielle Middleton-Beck, My Pet Guardians

The keeping of lizards as companion animals, by the general public, has risen in popularity over recent decades with many companion lizards being viewed as 'easy to care for when compared to other companion animals' (CAWC 2009), and are seen as having limited intelligence. Therefore, many companion lizards are housed in minimalistic enclosures where convenience and simply keeping the animal alive is the main priority. This is in contradiction to how many lizards are housed in zoos, particularly those kept on display, which are housed in more naturalistic and enriching enclosures which cater for both physical and psychological health.

Due the limitations of being ectothermic, lizards kept as companion animals are reliant on their enclosures for their physical and psychological health. The inability to perform natural behaviours or cope with the stressors placed upon them when housed in minimalistic enclosures, as companion animals, often leads to the development of behavioural problems in captive lizards, including aggression, repetitive behaviours and feeding problems.

Training Raptors Force Free and Without the Use of Equipment

Carina Soegaard Ellebaek; Ree Park Safari

Training raptors is a field where there is still a lot of new things to discover. Until today, the most common way to train raptors is with equipment often followed by the use of force in some way. In Ree Park Safari we had trained raptors for 9 years this way, until in 2012 we decided that it had to be possible to do it without equipment and the use of force. We decided to remove the equipment, work with them force free, and with the aim of positive reinforcement. This of course did not happen in one day. We used a lot of time planning how to approach this goal, without compromising the safety of our raptors. Today we train hawks, owls, and a falcon without equipment, and all of our birds are free lofted. We are also expanding our way of training raptors, by training behaviors we would never train before, like getting a hawk to put its head into an anesthesia mask. I will tell our story, show what we have done, what challenges and successes we have had. It is

my hope that I can inspire more trainers to venture this way, and that we with time will get more experience in a field where there is so much more to learn.

Break

3:00pm–4:00pm

What's the Function?

Susan G. Friedman, Ph.D.; Behavior+ Works

Problem behavior never occurs in a vacuum. Like all behavior, problem behavior is dependent on the conditions in which it occurs. By systematically assessing those conditions through functional assessment interviews and direct observations, we greatly increase the probability of designing and implementing successful interventions. When a problem behavior has the potential to severely reduce the quality of an animal's life, cause harm to staff, or is especially confusing, a third strategy called functional analysis provides the formal test we need to be ascertain exactly what reinforcer maintains the behavior. With these procedures, interventions can be designed that strengthen appropriate alternative behaviors and teach new skills.

Susan G. Friedman is a professor emeritus in the Department of Psychology at Utah State University. She has helped pioneer the cross-species application of behavior analysis to animals, using the same humane philosophy and scientifically sound teaching technology that has been so effective with human learners. She has written chapters in three veterinary texts, and her popular magazine articles have been translated into 13 languages (www.behaviorworks.org). She has given seminars on learning and behavior at conferences and zoos in many countries around the world. Teaching her on-line class for professionals, Living and Learning with Animals, has provided even wider dissemination of effective and humane behavior change practices.

4:00pm-5:00pm

Presentations

An African Adventure: Raising Awareness through R+ Training Methods

Barbara Glatz; Animal Training Center

The Animal Training Center has been dedicated to wildlife education and rescuing animals since its beginnings. Wanting to share our experiences in training people and animals, we started a cooperation with a long-established private wildlife rehabilitation centre in Tanzania, Africa.

In a very different culture where empathy and compassion along humans are not priorities, it is even harder to find those characteristics when it comes to animals. The first big challenge was showing people that animals have feelings and need appropriate care to survive and thrive. Increased human-wildlife conflicts due to habitat loss made it even harder when we tried to emphasize that wildlife and nature are important.

New challenges arise every day: working with employees and students on the farm and informing the police about positive ways of training their animals turned out to be a very difficult attempt. To overcome those problems we had to start to think the same way they do. How can people benefit from acknowledging feelings of animals? How can we overcome their lack of compassion? We found that it worked the best through getting themselves involved emotionally - building relationships with individual animals and training them through positive reinforcement training methods. The results are astonishing! The people involved experienced a whole new world which is characterized by trust, empathy and understanding. These are qualities they often can't even find within their families. The interest and enthusiasm we encounter is very touching and encourages to continue with our work despite all defiances.

Using Behavior Management to Help Regulate a Diabetic Golden Lion Tamarin (*Leontopithecus rosalia*)

Jennifer Hennessey; Roger Williams Park Zoo

I had contemplated injection training with our callitrichids for years but could never justify the time and effort I thought would be necessary to achieve a behavior I may or may not use. When our female golden lion tamarin (*Leontopithecus rosalia*) was diagnosed with diabetes in January 2014, it became necessary to develop a behavior management plan that included hand injections to manage her illness. I will discuss the changes we made to her exhibit design, social grouping, and nutrition as well as the steps taken for urine collection and injection training that have led to a significant decrease in her glucose levels. While I had theorized it would take a significant amount of time to injection train any of the callitrichids, in actuality it took just 28 days.

Good Motivation and Welfare Can Result In Good Animal Conservation: Using Psychophysics Research To Determine the Effect of Anthropogenic Noise on Marine Animals

Kirstin Anderson Hansen¹, Magnus Wahlberg¹, Ursula Siebert²; ¹University of Southern Denmark, ²University of Veterinary Medicine Hannover

At the University of Southern Denmark's Marine Biology Research Center, two male grey seals and two cormorants are trained for various research projects. They are currently participating in a bioacoustic study to determine the effects of anthropogenic noise from windmill parks and shipping noise on their daily life of searching for food, communicating with other conspecifics and raising their young.

Training animals for cognitive research projects can entail the animals having to do numerous repetitions of the same task over a long period of time, so how do we maintain the animal's motivation to continue to do the task while not affecting the research data? We would like to share with you what factors we considered in order to maintain good motivation as well as good animal welfare.

5:00pm-5:15pm **2016 Conference Announcement**

6:30pm – 7:00pm **Cocktails**

7:00pm – 10:00pm **Banquet**

Hall "Terrassen/Veranda/Pavillon/Glassal"

Hall "Terrassen/Veranda/Pavillon/Glassal"



Daily Schedule

Sunday, April 19th



9:00am–4:00pm

Post Conference Trip
Aventura Sailing and Porpoise Watching

Hotel Lobby



Committee Descriptions



Behavior Management Fund

This committee coordinates the development of descriptions of scholarships and grants including application and recipient criteria, the benefits of each scholarship/grant, the scholarship/grant review process, and the fundraising strategies necessary to support ABMA scholarships/grants that the BMF Committee develops. The Behavior Management Fund Committee ensures the continued financial health of the Behavior Management Fund and the continuing development of ABMA scholarships and grants. The co-chairpersons are Michelle Farmerie and Genevieve Warner.

Conference

This committee works closely with the 1st Vice President to organize the annual conference, including arranging the schedule, speakers, workshops, and events. The co-chairpersons are Maura Davis and Justin Garner.

Conference Content Advisory

This committee serves the important function of ensuring that the content of the annual conferences is of the highest quality and relevance to the ABMA membership. This committee assists the conference committee by suggesting speakers, maintaining a conference template, ensuring workshops and demonstrations are rotated as needed so that current topics of interest are explored, and acquiring the CEU credits for each conference. The CCA Committee reviews and scores abstract submissions and works with the conference committee to select poster and paper presentations for each conference. The committee also maintains a historical document that contains previous workshop presenters and key note speakers as well as video documentation of the conference presentations. The co-chairpersons are Megan Phillips and Christine McKnight.

Education

This committee is responsible for educating the membership, future members, and other like-minded organizations about the ABMA and what we offer as an organization. This committee creates brochures and advertisements, as needed, for educational purposes to better promote the function of the ABMA. For the annual conference, the education committee is responsible for organizing career night. The chairperson is Missy Lamar.

Government Affairs

This committee monitors and reviews proposed government rulemaking, regulations, and laws regarding animal behavior management for both domestic and exotic species. The committee reviews all proposed rules, regulations and laws on the federal register and recommends action to the board of directors. The chairperson is Justin Garner.

Honors and Awards

The responsibilities of this committee include all aspects of judging and awards at the annual conference. This includes selecting judges, ordering awards, overseeing judges throughout the process, processing the "impact award", tallying votes, and presenting awards. The co-chairs are Jennifer Hennessy and Scott Trauger.

Membership

This committee's main objectives are to brainstorm ways to increase new and retain current memberships. This committee works cooperatively with other ABMA committee to ensure that the ABMA member's expectations and needs are met. It continues to search for ways that ABMA can better serve its members. In addition, the Membership Committee also looks for ways to reach out to prospective members. To do this, committee members distribute information about the ABMA at their facilities, conferences or other related meetings. Finally, the Membership Committee also looks for ways to promote the ABMA and its core values. The chairperson is Amy Schilz.

Merchandise

The Merchandise Committee is responsible for anything related to the merchandise needs for the organization. This includes providing ideas and prices to the board of directors for items to sell at each annual conference, working with the conference committee for ideas for the conference bags and giveaways, and making sure the appropriate permits are in place for sales and raffles for each conference location. The committee chair is also responsible for working with the conference committee to coordinate the scheduling of volunteers to help with sales at each conference. During the rest of the year, the chair is responsible for any merchandise inquiries and mail order sales. The chairperson is Susie Ekard.

Nominations and Elections

The Nominations and Elections Committee, chaired by the past president, solicits and reviews nominations for the board of directors; puts together a slate for approval by the board; and coordinates the election of the slate by the membership. The chairperson is Heather Samper.

Proceedings

The proceedings committee collects, edits, and formats papers from all of the presentations and posters at the annual conference. The committee then compiles these papers into a PDF file. This PDF file can be found on the website as a member benefit. As a member you can read the online proceedings from all our conferences even if you did not attend! The chairperson is Jen Hickman.

Public Affairs

The Public Affairs committee is responsible for communications with the membership and marketing of the organization. This committee maintains social media such as the ABMA's Facebook and Twitter sites and is responsible for maintaining regular contact with the members through bulk email at least once per month. In addition, the committee maintains records of any press coverage received by ABMA and sends out press releases on behalf of the ABMA. The public affairs committee coordinates joint press releases with hosting institutions in advance of the annual conference. The chairperson is Margaret Rousser.

Publications

The Publications Committee is responsible for putting together and publishing the quarterly member newsletter, the ABMA Wellspring. This involves solicitation of articles and other content, reviewing and editing submissions, formatting the newsletter, and working with the printing company to have it printed and mailed to members. The chairperson is Heidi Hellmuth.

Research and Evaluation

The responsibilities of the Research and Evaluation Committee are to address the use of behavioral research as a husbandry tool to enhance animal welfare and management in both captivity and the wild and to increase awareness of on-going behavioral research relevant to member interests. The committee also facilitates contact with in-situ research projects in collaboration with the Behavior Management Fund. Finally, the committee conducts inquiry-based assessments, governance evaluations, and other research-related endeavors as needed by the ABMA, including annual conference and member surveys. The chairperson is Darren Minier.

Site Selection

The Site Selection Committee is responsible for potential conference locations. This committee makes the initial connections with institutions looking to host a future conference, then researches the possibility of a facility for a potential conference location, which may include possible travel to this location. Ultimately, a conference site is chosen based on this committee's recommendations. The chairperson is Kelly Elkins.

Sponsorship

The ABMA is a 501c(3) non-profit organization. This committee is responsible for researching, identifying, and securing funding sources to support the ABMA. The chairperson is Cathy Schlott.

Website

The Website Committee is mainly responsible for the maintenance of all aspects related to the website including making updates to the site, handling website feedback, managing job postings, maintaining website security, working with the website administrator, and determining future improvements for the website. The chairperson is Heather Samper.



Delegate List



Name	Email	Facility / Institution
Alcott, Marc	maa@zoo.dk	Copenhagen Zoo
Andersen, Pernille	pea@zoo.dk	Copenhagen Zoo
Anderson Hansen, Kirstin	kirstinhansen@biology.sdu.dk	University of Southern Denmark
Arentsen, Maria	ma@regnskoven.dk	Randers Tropical Zoo
Ankjær Nielsen, Kim	kim.ankjaer.nielsen@gmail.com	Odense Zoo
Bailey, Arianna	Arianna36@gmail.com	Natural Encounters, Inc
Beck, Danielle		
Berg Hansen, Sofie	sofieh596@gmail.com	Odense Zoo
Bertilsson, Eva	eva@carpemomentum.nu	Carpe Momentum
Bjerre, Pernille	peb@rts.dk	Roskilde Technical College
Bøgelund Jensen, Caroline	carje11@student.sdu.dk	Odense Zoo
Bojesen Lauridsen, Tanya	tanyabojesenlauridsen@gmail.com	Odense Zoo
Bouchet, Christilla	chris_feline@hotmail.com	Amneville Zoo
Boyd, Nicki	nboyd@sandiegozoo.org	San Diego Zoo
Brando, Sabrina	sbrando@animalconcepts.eu	AnimalConcepts
Buckley, Cara	carabuckley123@hotmail.com	Monkey World Ape Rescue Centre
Cederroos, Dennis	dec@zo.dk	Copenhagen Zoo
Christensen, Anne	anc@zoo.dk	Copenhagen Zoo
Collatz Christensen, Nina	ncc@odensezoo.dk	Odense Zoo
Comb, Larissa	lcomb@hotmail.com	San Diego Zoo Safari Park
Diver, Kate	diver_kate@hotmail.com	Monkey World - Ape Rescue Centre
Dreyer Nielsen, Nynne	Nyndra@hotmail.com	
Ekard, Susie	sekard@sandiegozoo.org	San Diego Safari Park
Elkins, Kelly	kmonkeyluv@yahoo.com	San Diego Zoo
Ellebaek, Carina	carinaellebaek@gmail.com	Ree Park- Ebeltoft Safari
Eriksen, Mia	mie@zoo.dk	Copenhagen Zoo
Famme, Mikkel	mfa@zoo.dk	Copenhagen Zoo

Friholm, Katrine	kf@zoo.dk	Copenhagen Zoo
Ganneskov, Sascha	skg@zoo.dk	Copenhagen Zoo
Garner, Justin	justingarner80@gmail.com	Busch Gardens Tampa - SeaWorld Parks & Entertainment
Garcia, David	garcia_mvz@hotmail.com	UNAM (Univrsidad Nacional Autonomy de México)
Gaus, Christa	christa.gaus@aviary.org	National Aviary
Glatz, Barbara	bg8@gmx.at	AnimalTrainingCenter, Austria
Groenlund Clausen, Cecilie	cgclausen84@gmail.com	
Gutierrez, Candice	cagutier@nmsu.edu	
Hallsworth, Andy	andy.hallsworth@banhamzoo.co.uk	Zoological Society of East Anglia. Banham Zoo
Hansen, Malene Friis	maf@rts.dk	Roskilde Technical College
Hardstaff, Victoria	victhechick@hotmail.com	Toronto Zoo
Hare, Valerie	shape@enrichment.org	The Shape of Enrichment, Inc.
Heidenreich, Barbara	BarbHeidenreich@aol.com	Barbara's Force Free Animal Training
Heikel, Mette	mhr@odensezoo.dk	Odense Zoo
Heinz, Daniel	dah@zoo.dk	Copenhagen Zoo
Hellmuth, Heidi	hellmuth@stlzoo.org	St. Louis Zoo
Hendrikse, Tom	mtwhendrikse@gmail.com	
Henley, Elaine	e.henley@btopenworld.com	
Hennessy, Jennifer	jhennessy@rwpzoo.org	Roger Williams Park Zoo
Hickman, Jennifer	jhickman@denverzoo.org	Denver Zoo
Holm, Asbjorn	ah@fimus.dk	Fiskeri- Og Soefartsmuseet, Saltvandsakvariet
Holse, Lars	lh@zoo.dk	Copenhagen Zoo
Hrkac, Ivana	info@zoo.hr	Zoological Garden of Zagreb
Jabas, Sandy	sandrajabas@hotmail.com	
Jenkins, Chris	c.jenkins@naturalencounters.com	Natural Encounters, Inc
Jensen, Kaare Thomas	krethomasjensen@hotmail.com	
Jensen, Liv	caj@zoo.dk	Copenhagen Zoo

Jones, Mark Kingston	mkjones@enrichment.org	The Shape of Enrichment
Kish, Carrie	clkish@gmail.com	Kish K9
Kjeldgård Hedeager, Jeanette	nette.hedeager@gmail.com	Odense Zoo
Kjellgren, Alex	AlexKjellgren@gmail.com	
Kjølby, Mathilde	makjo11@student.sdu.dk	University of Southern Denmark
Knudsen, Mette	mkn@zoo.dk	Copenhagen Zoo
Kolboelk, Christina	chrismads@live.dk	Givskud Zoo
Kolind, Rasmus	kolind7@hotmail.com	Odense Zoo
Koppelhus, René	rek@zoo.dk	Copenhagen Zoo
Kuiper, Evianne	eviannekpr@hotmail.com	
Kusk, Signe	sku@odensezoo.dk	Odense Zoo
Loejtved Poulsen, Janni	loejtved@hotmail.com	Jyllands Park Zoo
Lablans, Ann	ann.lablans@queensu.ca	Queen's University`
Lamar, Missy	missylamar@mac.com	SeaWorld San Antonio
Lamm, Michelle	m1a@denblaaplanet.dk	The Blue Planet
Langager, Kristine	dobby1805@yahoo.dk	Odense Zoo
Lavallee, Christina	repeat99@hotmail.com	Zoo Atlanta
Lemonnier, Francois	francois@email.dk	Givskud Zoo
Lorentsen, Karina	kal@zoo.dk	Copenhagen Zoo
Loejtved Poulsen, Janni	loejtved@hotmail.com	Jyllands Park Zoo
Louwerse, Annet	louwerse@bprc.nl	Biomedical Primate Research Centre
Lundkvist, Line	linelundkvist@gmail.com	
Lusardi, Clinton	CLusardi@sandiegozoo.org	San Diego Zoo
Maag, Hilary	hvm@sonic.net	San Francisco Zoo
Macklin, Courtney	cmacklin@buffalozoo.org	Buffalo Zoo
Madsen, Rikke	rim@zoo.dk	Copenhagen Zoo
Martin, Steve	s.martinnei@mac.com	Natural Encounters, Inc
Martinez, Gerardo	grmtzz@yahoo.com	Golden Triangle Asian Elephant Foundation and Africam Safari
Maxwell, Alyssa	maxwell_a@live.ca	University of Southern Denmark
Melgaard Hedegaard, Mette	mhe@zoo.dk	Copenhagen Zoo

Meuleners, Leighanne	leighannemeuleners@gmail.com	
Mollerup, Rikke Marstrup	berner_azuro@hotmail.com	
Nielsen, Anette	aln@odensezoo.dk	Odense Zoo
Nielsen, Jacob	niller_rysberg@hotmail.com	Odense Zoo
Nielsen, Mette	mni@denblaaplanet.dk	The Blue Planet
Nielsen, Rasmus	info@discovernature.dk	Discover Nature
Nielsen, Sandie	shn@odensezoo.dk	Odense Zoo
Oersnes, Christian	cho@zoo.dk	Copenhagen Zoo
Paddock, Heather	hpaddock71@gmail.com	
Pedersen, Annette	ap@zoo.dk	Copenhagen Zoo
Pedersen, Birgitte	bp@regnskoven.dk	Randers Tropical Zoo
Pedersen, Rasmus	rap@zoo.dk	Copenhagen Zoo
Perry, Krista	kpsdzoo@gmail.com	San Diego Zoo
Petersen, Lea	nzat2006@hotmail.com	Gaia Zoo
Piroz, Keyvan	kedol11@student.sdu.dk	University of Southern Denmark
Pivarcsi, Judit	pivarcsi.judit@gmail.com	Budapest Zoo & Botanical Garden
Rasmussen, Betina	bra@odensezoo.dk	Odense Zoo
Rasmussen, Jesper	jr@zoo.dk	Copenhagen Zoo
Roemer, Sarah	sarah_romer@hotmail.com	Givskud Zoo
Ramirez, Antonio	antonio.ramirez@buschgardens.com	Busch Gardens
Riis, Jacob	jri@zoo.dk	Copenhagen Zoo
Roost List, Søren	srl@odensezoo.dk	Odense Zoo
Rousser, Margaret	margaret@oaklandzoo.org	Oakland Zoo
Salas, Rodrigo	kyanor56@gmail.com	
Salima Schnéevoigt, Rebekka	res@zoo.dk	Copenhagen Zoo
Samardzija, Mirko	info@zoo.hr	Zoological Garden of Zagreb
Samper, Heather	hmsamper@comcast.net	Mutts with Manners
Sampson, Alicia	alicia.sampson@cincinnati-zoo.org	Cincinnati Zoo
Sargent, Kristyn		San Diego Zoo Safari Park
Schlott, Cathy	cathy.schlott@aviary.org	National Aviary
Skov, Kamilla	kas@zo.dk	Copenhagen Zoo
Skrovan, Stefani	sskrovan@mml.calstate.edu	Slewths Sea Lions

Snijders, Nicolette	n.snijders@artis.nl	Artis Zoo (Amsterdam Zoo)
Sommer, Annemette	fru.sommer11@gmail.com	
Sonne, Zaco	zs@zoo.dk	Copenhagen Zoo
Stange, Lærke	laerkesd@live.dk	Odense Zoo
Sullivan, Tim	tim.sullivan@czs.org	Chicago Zoological Society - Brookfield Zoo
Susta, Frantisek	susta@zoopraha.cz	Prague Zoo
Svenstrup, Uffe	ufs@zoo.dk	Copenhagen Zoo
Sweeney, Quincy	quinls@gmail.com	
Tærsebøl Jepsen, Malene	malene-jepsen@hotmail.com	Odense Zoo
Thoestesen, Charlotte Bie	cbt@fimus.dk	The Fisheries and Maritime Museum
Thornholm, Iben	dyrilivet@gmail.com	Landbrugsskolen Sjælland-Hoeng
Torres Ortiz, Sara	sarilla73@hotmail.com	University of Southern Denmark
Tranberg, Lotte	lottetranberg@gmail.com	Odense Zoo
Trauger, Scott	michael.scott.trauger@gmail.com	Tampa's Lowry Park Zoo
van der Heide, LÃ©on	leonvdheide@hotmail.com	Emmen Zoo
van der Leije, Lex	lex_van_der_leije@hotmail.com	Gaia Zoo
van Velzen, Marlies	velzen@bprc.nl	Biomedical Primate Research Centre
Vepsalainen, Ville	ville.vepsalainen@hel.fi	Helsinki Zoo
Vinding, Villy	villyvinding@gmail.com	Givskud Zoo
Vosveld, Nathalie	nathalievosveld@gmail.com	
Wahlroos, Merja	merja.wahlroos@hel.fi	Helsinki Zoo
Wallberg Sørensen, Michael	mws@odensezoo.dk	Odense Zoo
Westlund, Karolina	behaviour.management@illis.se	ILLIS Animal Behaviour Consulting
Wheatley, Alison	axwheatley@gmail.com	
Wiborg, Ellen	elw@zoo.dk	Copenhagen Zoo
Wieczorek, Ellen	esw78@comcast.net	
Wilenius, Carina	carina.wilenius@hel.fi	Helsinki Zoo
Wilson, Cindy	cynthiawilson@vcccd.edu	Moorpark College
Wilson, Gary	gwilson@vcccd.edu	Moorpark College

Wisboel, Holger

how@zoo.dk

Copenhagen Zoo

Witt Zehngraff, Laura

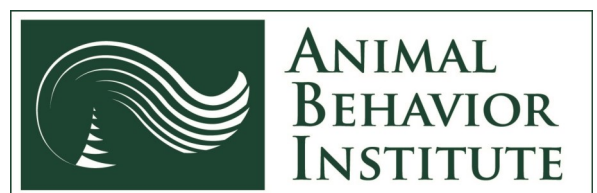
Laura_witt_zehngraff@hotmail.com

Zeligs, Jenifer

jzeligs@mlml.calstate.edu

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