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Letter from the President



Hello ABMA members!

My name is Scott Trauger and I am your new president through the end of the Portland, Oregon 2019 ABMA conference. Unfortunately, for the first time in half a decade, I was unable to make it to the annual conference in San Antonio this past April. While I personally feel these conferences are one of our strongest member benefits, it allowed me to see the perspective of our members who may not be able to attend the conference on a yearly occurrence. I was often asked by people who couldn't attend, "What can I do to fill that void?". Luckily for us all, member benefits is a huge topic of discussion for our Board of Directors at our annual meetings. Over the next year, there are many exciting things the board has in store for our members, so stay tuned for updates. In the meantime, don't forget about the resources already available to our members. One of my favorite partnerships with ABMA is AnimalProfessional.com. These dedicated individuals record every presentation at the conference (and have for over five years), and you can use them as a library for all types of topics. Need information on Giraffe Hoof trims? It can be found there. Need ideas for Ambassador animal behaviors...also found there. What about information on domestic animals...also there! In addition to this wonderful partnership, there are other benefits, such as courses offered through Collaboration, our quarterly member magazine Engage, and up to date information on legislation in regard to many of the animals that are in our care. These resources provide plenty of opportunities to learn, but there is also room to shape our organization, too. I urge each and every member to look over the website at theabma.org and go to the committee's page and learn what roles they serve. If you have a passion or question in regard to one of those committees, simply click on the chair's name and their email address will appear so you can start a dialogue about becoming more involved. As always, if you have any feedback for the organization as a whole, please feel free to contact me personally at Michael.Scott.Trauger@gmail.com. This is truly a member driven organization and we want you to help shape our future through sharing your ideas, knowledge, and expertise. I personally want to thank each and every one of you for adding a unique piece to our puzzle that helps to make us the best Animal Welfare, Enrichment, and Training organization in the world, regardless of taxa. I look forward to hearing from or speaking to each and every one of you in the near future.

Sincerely,
Scott Trauger
ABMA President 2018-2019



ABMA Board of Directors:

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ABMA DISCLAIMER

One of the core values of the ABMA states that:

1. 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. Our written publications feature many fascinating and thought-provoking papers and articles. Some you may agree with, others may challenge your perceptions and ideas. And while the content that you read 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 take in all that you read with an open mind, because you might be surprised by what you learn.

Thank you and enjoy the publication!

ABMA Early History



ABMA's founders determined that ABMA would become an organization of animal trainers and for animal trainers. Training and enrichment were viewed by the founders as a zoological best practice. By design, the new organization would appeal to members with an interest in applying operant techniques to the widest possible spectrum of animal life in order to enhance their care and welfare. ABMA would be inclusive, not exclusive and our annual conferences would be a celebration of behavioral achievements that advance and enhance animal care and welfare.

Founding Directors - Then

The ABMA had nine founding directors. I have presented a brief sketch of each at the time ABMA came into existence. The founders are listed in alphabetical order. Please note that the founders were at various stages of their professional career development. It was a well-rounded group that valued the diverse perspectives and the experience each member brought to the team. While the founders may have had different responsibilities with their employers, at ABMA board meetings we were equals who shared a common dream and vision.

Michelle Farmerie - Primate Keeper – The Pittsburgh Zoo

Michelle Farmerie was the youngest member of the founding director team. Fresh out of college, she landed a keeper position at the Pittsburgh Zoo & PPG Aquarium. She came to our attention as a result of the amazing target training and stationing work she had been doing with a gang of callitrichids. A video of her work was made for a conference presentation and the founding directors were uniformly impressed with what they saw. Armed with tiny targets and a side bucket of treats, Michelle would step into the animals' space with at least a dozen free ranging primates excitedly flying around. She would begin to reinforce animals for stationing quietly on a predetermined branch. Can you imagine all of the social dynamics she had to deal with when working with more than a dozen tiny primates? But with great patience and persistence, she did it because she didn't know that she couldn't! That Michelle had managed to achieve a level of behavioral control with these animals in an impossible situation impressed everyone who saw the presentation. A new keeper with fresh new ideas for the zoological application of operant conditioning was a wonderful addition to the founding director team. Michelle was elected ABMA's fifth president.

Jane Anne Franklin – Supervisor Animal Training - The Louisville Zoo

When we first met, Jane Anne was training sea lions, with a goal to apply what she learned there, in the care of various animals in the Louisville Zoo. She has certainly done that. All of the founding directors brought something unique to the table. I do not believe that Jane Anne ever met a person she did not like. Of course, she liked some more than others! With her strong Southern drawl, big smile, backed up by a bigger personality and a strong sense of her own personal direction, Jane Anne brightens and enlivens any room that she occupies. Her opinions are strong but never abrasive, which is a difficult talent to master but one that was added to the ABMA's DNA through her participation.

Butch Haft – Animal Keeper - The Cincinnati Zoo

Butch was an old school keeper with a keen interest in what operant conditioning might do for improving the care and welfare of his animals. His passion was to see as many keepers as possible learn how to utilize behavioral management in their jobs. Butch was instrumental in organizing area keepers and working with the Zoo's management to host the first exploratory meeting to present keepers with the idea of forming the ABMA. At the end of the Cincinnati meetings, attendees agreed that such an organization would be valuable. Dozens of keepers put their hands into their wallets and donated a suggested \$25 dollars (or whatever they could afford), so that the fledgling organization could begin the process of formation and incorporation as a 501 (c)3 not-for-profit. Butch was also responsible for working with some talented folks at Cincinnati for the development of the ABMA's logo.

Heidi Hellmuth – Wildlife Theater Curator – Loon Mountain - New Hampshire

Communications is a critically important function of any organization, new or well established. Heidi turned out to be a workhorse with unlimited drive, creativity, dedication and vision. She took on the responsibility for developing, writing for and publishing Wellspring, the ABMA's newsletter. At the same time, Heidi was seeking professional advancement and moving frequently as she gained experience. Heidi continued to serve on the ABMA board of directors and was the 11th president long after most other founding directors cycled off their terms of office.

Sue Hunter – Curator - Marine Mammals - The National Aquarium - Baltimore

Still waters run deep. At ABMA's founding, Sue Hunter was a surprise gift to our group. She seemed to always wear a serene smile, was quiet and thoughtful but the founding directors soon discovered that she had the heart of a lion. Sue was quiet giant. Her work ethic demanded that every task she took on was completed on time and at the highest possible standard of excellence. I never once saw her angry or argumentative during planning meetings. I believe she was the only one to accomplish that! As a proven natural leader, Sue was elected to serve ABMA as its sixth president.

John Kirtland – Curator of Mammals – Wildlife Safari - Winston, Oregon

John Kirtland and I began our careers as marine mammal trainers. John was with the US Navy's Marine Mammal Program in Hawaii while I was getting my start in the business at Sea World in San Diego. But by the late 1980's both of us were now working with terrestrial animals at zoos. Over the years, John and I stayed in touch and discovered that both of us were seeing the same emerging opportunities and industry needs. Through our many long phone calls with each other and within each of our professional networks, we became convinced that people caring for animals in zoos would benefit by having access to a national organization of like-minded professionals who were interested in providing the best possible care to their charges by applying the most advanced techniques in positive reinforcement. John had a great deal of experience serving on the board of the International Marine Animal Trainers Association (IMATA). While on the board of IMATA, John had become close friends with Tim Sullivan and Thad Lacinak who, at that time, I knew only by their names and reputation. John reached out to Tim and Thad and they confirmed that they were seeing the same industry need and opportunity. Between the four of us representing parks in Orlando, Chicago, Oregon and San Diego we were convinced. Confirmation of the need was growing stronger and our list of collaborators was growing longer. John, with his meticulous nature, knowledge of Parliamentary procedure, corporate governance, and by-laws was the unanimous selection for the organization's first president.

***Thad Lacinak – Vice President and Corporate Director of Animal Training,
Busch Gardens and Sea World Parks (Orlando, San Antonio, San Diego)***

Thad is a force of nature. He seems to make his own weather when he enters a room. As a former Sea World killer whale trainer myself, Thad, in my opinion, was the poster boy for what a Sea World killer whale trainer should look like. With steely eyes, a firm jaw, hands resolutely resting on the hips and cape flapping in the wind, ladies and gentlemen, Thad Lacinak! Thad is quick-witted, opinionated, funny and was like having an otter show up at every meeting. I love the man. Going to a meeting with Thad was never disappointing, was always fun and amazingly productive. As a vice president of what was then, the world's finest group of marine parks, Thad brought his personality, experience on IMATA's board and some financial resources to the early ABMA table. He convinced his Sea World colleague Ted Turner to serve as the facilitator for our meetings to forge our mission and vision statements. Thad served as ABMA's fourth president.

Gary Priest – Curator of Applied Behavior – Zoological Society of San Diego

Gary's experience with incorporating two other companies in Nevada proved helpful in those early days. At that time, Nevada was one of only two states that had no state tax on corporations incorporated there. Besides his skill as an animal trainer, Gary is a real people person and has made friends throughout the animal industry through his involvement in IMATA and AZA. His thoughtfulness and tact were important in helping the often opinionated founders resolve disagreements not uncommon to a fledgling organization. He convinced the management of the San Diego Zoo to host the first and very successful ABMA conference. Gary was ABMA's third president.

***Tim Sullivan – Coordinator of Animal Training/Enrichment
Brookfield Zoo – Chicago Zoological Society***

Like John Kirtland, Tim Sullivan also had a great deal of experience on the IMATA board of directors. Like other founders, Tim was an early marine mammal trainer who was branching out to experiment with operant conditioning with other animals at the Brookfield Zoo in Chicago. Tim is soft spoken, has an easy laugh, is very gregarious and very knowledgeable about both operant conditioning and corporate governance. Tim was the natural and unanimous choice as the young organization's second president.

***Gary Wilson – Instructor - Director of the Moorpark College Exotic Animal Training and
Management program EATM - Moorpark, California***

Gary Wilson was one of the first graduates of the Moorpark College program under William Brisby. After Moorpark, Gary went to work in the US Navy Marine Mammal Program in San Diego and Hawaii. When the Moorpark program's founder retired, Gary's career track brought him back to Moorpark as both an instructor and the program's director. His background in preparing new trainers to enter the field served to fill an important role in our founder team's make up. Gary was ABMA's first financial officer.

Special Recognition - Lee Nesler – General Curator – Pittsburgh Zoo & PPG Aquarium

While not a founding director, Lee's role in the foundation of the ABMA was a critically important one. Lee is a gregarious person by nature and enjoys good fellowship and laughter. Lee secured permission from her zoo's director to host the first planning meeting of what was to become the ABMA. The Pittsburgh Zoo graciously provided us with their boardroom for our planning meetings. In the evening Lee insisted on taking up the face of a cliff in an ancient cable car, to dinner at Bucca de Beppo, located on a cliff overlooking downtown Pittsburgh across the river. Lee was instrumental in firmly establishing the all-important professional comradery that ABMA is still known for.

Founding Directors – Today

Michelle Farmerie - Michelle has remained in Pittsburgh and continues to serve as a primate keeper at the Pittsburgh Zoo & PPG Aquarium. On the academic front, as you read this update, Michelle will be defending her PhD dissertation at Robert Morris University. Michelle's cutting edge research focuses on the impact of operant conditioning and program animals on school aged children.

Jane Anne Franklin – Jane Anne still has made her career at the Louisville Zoo. Jane Anne is now the Louisville Zoo's mammal curator and animal training supervisor where she manages all animal training programs.

Butch Haft – After many years of faithful service to his animals, Butch Haft has retired as an animal keeper at the Cincinnati Zoo.

Heidi Hellmuth – Heidi's career has involved a great deal of travel. She spent time training rhinos at Zoo Atlanta, managed an animal facility in New Hampshire, worked at the Philadelphia Zoo, the National Zoo, Northwest Trek in Washington state, consulted with the Taronga Zoo in Australia and now works at the Saint Louis Zoo as Curator of Primates. Heidi is the only ABMA member who has managed to attend every ABMA conference to date.

Sue Hunter and John Kirtland – In the ABMA constellation, Sue and John's light would burn brightly but for a shorter time. Of the original founding directors, John and Sue were both taken a few years apart by aggressive cancers. Their passing left massive holes in each of our hearts.

Thad Lacinak – Ken Blanchard and co-author Thad Lacinak wrote the best-selling book, "Whale Done". It is a leadership book on the application of positive reinforcement with people. Thad retired from Sea World and Busch Entertainment a few years later. Thad and his wife, Angi Millwood (also involved in ABMA) live in the Orlando area and own the behavioral consulting firm, Precision Behavior. They have clients all over the world yet Thad still manages to find time to fish.

Gary Priest – The Zoological Society of San Diego has become San Diego Zoo Global. A few years ago, San Diego became interested in staff training through online education. Together with his partner, Jon Prange, the San Diego Zoo Global Academy came to life. The Academy now provides online animal care content and best practices to 180+ zoos and aquariums around the world.

Tim Sullivan – Tim is still with the Brookfield Zoo and is now the Curator of Behavioral Husbandry. He transitioned the Brookfield Zoo's elephant management program from free contact to protected contact. He has consulted with other zoos around the country. For the last four years, Tim has taught animal training applications in zoos and aquarium settings at the AZA school currently in Denver.

Gary Wilson - I can say with confidence that Gary remembers every Moorpark graduate working at every zoo and aquarium in the industry. He and his wife Cindy enjoyed over 30+ years teaching at Moorpark. This dynamic husband/wife team have taught thousands of aspiring animal trainers. Their influence is virtually everywhere in our industry. Gary and Cindy have a grandchild now but continue to teach at Moorpark College. Gary is also one of the finest wildlife photographers I have ever met. His knowledge of animal behavior and sense of timing were perfect compliments to his long time avocation of photography.

Lee Nesler – Lee left the Pittsburgh Zoo & PPG Aquarium to become the executive director of the Western Pennsylvania Humane Society. After eight years, Lee missed the conservation work done in zoos so after a few years, she relocated to central Florida to become the executive director of the Lemur Conservation Foundation. She has made several trips to Madagascar. Recently, Lee became the executive director of the Lake Humane Society near Cleveland and is working with Gary Priest to introduce the Academy's training to humane societies around the United States.

2018 Honors and Awards

Travel Scholarship Winner:

This scholarship is awarded to an ABMA member whose institution is unable to give them financial support. 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 the membership otherwise would not have the opportunity to hear and as such, the Travel Scholarship supports the ABMA Core Value of “Sharing the Knowledge”.

Utilizing Training to Determine the Energetic Cost of Polar Bear Behaviors at the San Diego Zoo

Becky Wolf, San Diego Zoo

Behavioral Management Achievement Award:

Recognizes an outstanding achievement in the application of behavior management techniques.

Change in The Flight Plan: Giving Rescued Macaws a Choice

Emily Yunker, Columbus Zoo and Aquarium

Behavioral Management Innovation Award:

Recognizes outstanding application of novel, unusual or original behavior management technique.

Allowing Choice and Control Over Diet for Our Polar Bear at The Kansas City Zoo

Andrea O'Daniels, Kansas City Zoo

Animal Welfare Advancement Award:

Recognizes achievements that enhance animal welfare through specific environmental enrichment/conditioning techniques or programs.

The Quarantine Experience

Nicki Boyd, San Diego Zoo

2018 Honors and Awards

Sharing the Knowledge Award:

Recognizes achievements in behavior management education to enhance the knowledge of professionals and/or the public to the benefit of animals in human care.

Opening the Barn Doors in a New Direction

Katie Stevens, Columbus Zoo and Aquarium

Poster Presentation Award:

Recognizes the best poster that represents an achievement in any of the above categories in this format.

Evaluating Enrichment-Using Activity Budgets to

Assess a Species-Specific Enrichment Program

Alison Kao, Lincoln Park Zoo

Engage Award:

The best article submitted for the year from the quarterly Animal Behavior Management Alliance magazine ENGAGE.

In a Word, “Captivity” Kills

Mark Simmons, OERCA.com

Impact award:

This award is chosen by all delegates at the end of the last formal presentation. Delegates may cast a vote for any paper, poster, or activity that they feel deserves special recognition.

Thad Lacinak, Precision Behavior

HERE ARE UPCOMING EVENTS IN 2019 FOR YOUR CONSIDERATION!

AZA COURSES PAGE: <https://www.aza.org/courses>

FEBRUARY:

Animal Training Workshop

February 5-7, 2019

San Antonio, TX. Hosted by San Antonio Zoo

<http://sazoo.org/trainingworkshop/>

Principles of Elephant Management I

February 11-16, 2019

Wheeling, WV.

<https://www.aza.org/principles-of-elephant-management-i>

International Association of Avian Trainers Conference

February 20-23, 2019

Orlando, FL. Hosted by Natural Encounters, Inc.

<https://iaate.org/iaate-conference/2019-iaate-conference>

Environmental Enrichment in Zoos and Aquariums

February 23-28, 2019

Orlando, FL. Hosted by Disney's Animal Kingdom

<https://www.aza.org/environmental-enrichment-in-zoos-and-aquariums->

The Art & Science of Animal Training Conference

February 23-24, 2019

Hurst, TX. Hosted by ORCA

<https://www.artandscienceofanimaltraining.org/conference/>

MARCH:

AZA Animal Transport For Animal Care Professionals

March 4-8, 2019

Miami, FL. Hosted by Zoo Miami

<https://www.aza.org/animal-transport-for-animal-care-professionals>

APRIL:

ABMA Annual Conference

April 7-12, 2019

Portland, OR. Hosted by The Oregon Zoo

<https://theabma.org/abma-annual-conference/>

AZA Mid-Year Meeting

April 13-18, 2019

Phoenix, AZ. Hosted by Phoenix Zoo

<https://www.aza.org/conferences-meetings#mym>

MAY:

AZA Animal Welfare: Evidence-Based Management

May 5-10, 2019

Brookfield, IL. Hosted by Chicago Zoological Society

<https://www.aza.org/animal-welfare-evidence-based-management>

AUGUST:

AAZK Annual Conference

August 18-22, 2019

Indianapolis, IN. Hosted by Indianapolis AAZK Chapter

<http://www.indyaazk.org/2019-aazk-national-conference/#main/home>

SEPTEMBER:

AZA Annual Conference

September 7-11, 2019

New Orleans, LA. Hosted by Audubon Zoo and Audubon Aquarium of the Americas

<https://www.aza.org/conferences-meetings>

AZA Managing Animal Enrichment & Training Programs

September 23-28, 2019

Denver, CO. Hosted by Denver Zoo

<http://www.aza.org/managing-animal-enrichment-and-training-programs>

AZA Animal Training Applications in Zoo & Aquarium Settings

September 23-28, 2019

Denver, CO. Hosted by Denver Zoo

Registration opens in early spring

<https://www.aza.org/animal-training-applications-zoo-aquarium-settings>

OCTOBER:

Principles of Elephant Management II

DATE TBD- October 2019

Houston, TX. Hosted by Houston Zoo

<https://www.aza.org/PEMII>

TO BE DETERMINED (IF OCCURRING):

Advancing Bear Care 2019

TBD

<https://www.bearcaregroup.org/>

Marine Mammal Behavior and Conservation

TBD

www.abcanimaltraining.com

Elephant Managers Association 2019 Conference

TBD

<http://elephantmanagers.com/testimonials/>

Canid and Hyenid Husbandry Course

TBD

Bearhavior: Applying Behavioral Research to the Management of Bears

TBD

http://www.beartag.org/?page_id=23

Otter Keeper Workshop

TBD

<http://www.otterkeeperworkshop.org/>

International Congress on Zookeeping

Every 3 years so not 2019

<http://iczoo.org/congress>

Recon: Reconnecting with Elephants in Restricted Contact

TBD

cmzoo.org/index.php/recon-elephant-workshop/

Felid TAG Conference

TBD

https://www.facebook.com/pg/felidtag/events/?ref=page_internal

Zoos and Aquariums Committing to Conservation

Not in 2019, not until 2020

<https://www.zaccconference.com/>



Training Techniques of Captive Cats

Kayla Ringuette, Diana Miller, Amy Schilz
Cheyenne Mountain Zoo

Background

Operant teaching strategies are employed by all captive facilities. For animals, learning is constantly occurring; behavior is constantly being either reinforced or punished. Reinforcement is defined by behavioral consequences that serve to maintain or increase future behavior, whereas punishment is the behavioral consequences that serve to decrease future behavior (Chance, 2003).

Recent studies have shown that control over one's environment is a primary reinforcer, along with food, shelter, and water (Laule, 2013). Even when faced with the inevitable aversive event, studies have shown that animals that have more control and predictability in their lives exhibit lower levels of stress during these situations (Seligman, 1968). Without choices in their lives, stereotypic behaviors and other negative byproducts tend to arise (Laule, 2003).

African Lion Cubs

Cheyenne Mountain Zoo (CMZ) is home to a variety of big cat species, including six African lions (1.2 adults and 2.1 juveniles). The juvenile lions ("cubs") were born June 25, 2015. When the cubs needed their first vaccinations at two months of age, keepers separated the cubs from their mother by shifting the dam into another stall. The cubs were then manually restrained for vaccinations, weights, and blood draws. During the restraints, the cubs showed signs of stress, including yelling, panting, attempting to bite, defecating, and urinating. The dam also showed signs of stress, including pacing, urinating, panting, and drooling.

When keepers realized this created a stressful situation for both the dam and the cubs, they asked themselves a very crucial question--what can we do to give these cubs choice and more control over their health in the future? What can we, as keepers, do instead? Keepers recognized a need to create an environment in which all of the lions would be able to voluntarily choose to participate in their own healthcare, therefore creating an environment in which they had more control over what was happening to them.



Moving Forward

The cubs started taking meat from their keepers at less than two months of age. At that time, keepers started implementing operant teaching techniques, and were able to establish voluntary behaviors in a short time frame. Two weeks after they started taking food, the cubs learned how to present their hips for voluntary injections. This was done by setting up a log parallel to the mesh. The cubs were asked to come in between the log and the mesh with a cue of “side.” This created an environment where doing the side behavior (hip on mesh) earned the cubs a high rate of reinforcement. Over a few weeks, the log prompt was faded out, and the behavior of “side” was the cub lining up parallel to the mesh. Keepers then would ask the cubs to hold still for pressure on the hip (a finger poke, tongs, a key, etc.). If the cub stayed still, they would earn a reinforcer (meat). The cubs were free to leave at any point in the training session, it was their choice to stay. They learned that their behaviors could create outcomes that were desirable. The cubs received all following vaccinations voluntarily, starting at 3 months of age.



We have been able to expand the behavioral repertoire of Cheyenne Mountain Zoo's lion cubs; they are currently trained to present body parts (paws, mouths, stomach) for examination, have been given many voluntary injections, are trained to present their tails for blood draws and blood pressures.



Natural behavior-based shows

In addition to training husbandry behaviors, CMZ also encourages keepers to train natural behaviors for public demonstrations. By using positive reinforcement training strategies, we have been able to enrich the lions' lives with cognitive stimulation (Laule, 2013). In our lion show, our animals have been trained for various behaviors including: "attacking" a cape buffalo statue in their exhibit, running A-B's across their yard, balancing across narrow rocks, standing on their back legs to touch a nose target, and scratching on logs.

Addressing Unwanted Behaviors

If we stop categorizing behavior as "good" or "bad" behavior and simply think of it as behavior that increases or decreases based off of antecedents and consequences, then we can start to use operant teaching techniques to empower animals in our care. For example, if a lion is pacing, it has been reinforced for that behavior. It is important to focus on what we want the animals to do, instead of what we want them to stop doing (Brinker & Freidman, 2001). For example, instead of wanting the lion to stop pacing, what would we want them to do instead? Then, how could we train the lion to do that behavior?

This shift in the way we view behavior allows us to train effectively by providing the animals alternative behaviors, reducing their stress levels, and giving them more choice in their lives.

Conclusion

Dr. Susan Freidman outlines the negative side effects of punishment-based training that can be generalized to other species from the companion animals she uses as examples. Side effects include increases in aggression and fear (sometimes creating phobias), and a decrease in interaction and responding to the trainer's cues (Brinker & Freidman, 2001). Positive alternatives should always be considered before pursuing aversive strategies. Punishment should be used infrequently, as a last resort (Laule, 2013). At Cheyenne Mountain Zoo, keepers initially thought they had no choice but to catch up the cubs for exams and vaccinations, until they asked that crucial question of, "what can we do instead?"

By developing strong relationships with your animals that increase trust and choice, you can have productive and effective training, without the side effects associated with punishment and negative reinforcement (Freidman & Martin, 2013).

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BIRTH ANNOUNCEMENTS

San Diego Zoo Welcomes First Endangered Baird's Tapir in 30 Years



It's "watermelon" season at the San Diego Zoo! A 13-day-old endangered Baird's tapir calf strutted his unique striped coat—with a watermelon-like pattern—before his scheduled bottle feeding at the Zoo's Harry and Grace Steele Elephant Odyssey. Animal care staff are helping with assisted rearing of the youngster, along with daily interactions between the male calf and his mother Luna—and the other animals that share his mixed-species habitat, behind a protective fence.

"Animal care and veterinary staff performed ultrasounds, using protective contact, for months leading up to the calf's birth, to identify milestones in Luna's pregnancy and provide useful information for future pregnancies of this endangered species," said Matt Akel, animal care manager. "The last endangered Baird's calf born at the Zoo was in 1988, so we're thrilled with the arrival of this male—and happy to provide him with optimal care, since mom wasn't successful."

After a 13-month gestation period, the calf was born behind the scenes on June 13, 2018 to first-time mom Luna. When she wasn't able to care for her newborn, animal care staff stepped in with assisted rearing, to ensure the calf's health. At birth, the calf weighed 22 pounds, but he has steadily gained weight. Keepers milked Luna through protected contact during the first week after the birth, to provide the calf with necessary nutrition and round-the-clock care. However, the calf's diet is now being supplemented with goat's milk and a protein mix, and bottle feedings are provided five times a day.

The calf's spots and stripes serve as camouflage protection in the dappled light of the tapirs' forest floor habitat. Calves begin to lose these markings after a few months, and they resemble miniature adults at about 8 months of age.

Baird's tapirs are native to Mexico and Central America. As a key species in shaping and maintaining the biological diversity of tropical forests, tapirs are vital components in their ecosystems. They are important seed dispersers and leave their forest habitat well fertilized, helping ensure new growth of plants that provide food and shelter.

The Baird's tapir is listed as Endangered on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species. Habitat loss and hunting have contributed to an estimated 50 percent population decline over the last 30 years. San Diego Zoo Global has long been committed to tapir conservation and has been a consistent supporter of tapir projects worldwide, along with contributing to the International Union for Conservation of Nature's Tapir Specialist Group. Additionally, the San Diego Zoo participates in the Association of Zoos and Aquariums (AZA) Baird's tapir Species Survival Plan (SSP), which aims to maintain a genetically viable population of this species in accredited institutions.

At the San Diego Zoo, the Baird's tapirs live in a mixed-species habitat, sharing their space with capybaras and guanacos. Guests visiting the Zoo can view the new tapir calf in the upper yard when he ventures into his outdoor area.

Bringing species back from the brink of extinction is the goal of San Diego Zoo Global. As a leader in conservation, the work of San Diego Zoo Global includes on-site wildlife conservation efforts (representing both plants and animals) at the San Diego Zoo, San Diego Zoo Safari Park, and San Diego Zoo Institute for Conservation Research, as well as international field programs on six continents. The work of these entities is inspiring children through the San Diego Zoo Kids network, reaching out through the internet and in children's hospitals nationwide. The work of San Diego Zoo Global is made possible by the San Diego Zoo Global Wildlife Conservancy and is supported in part by the Foundation of San Diego Zoo Global.

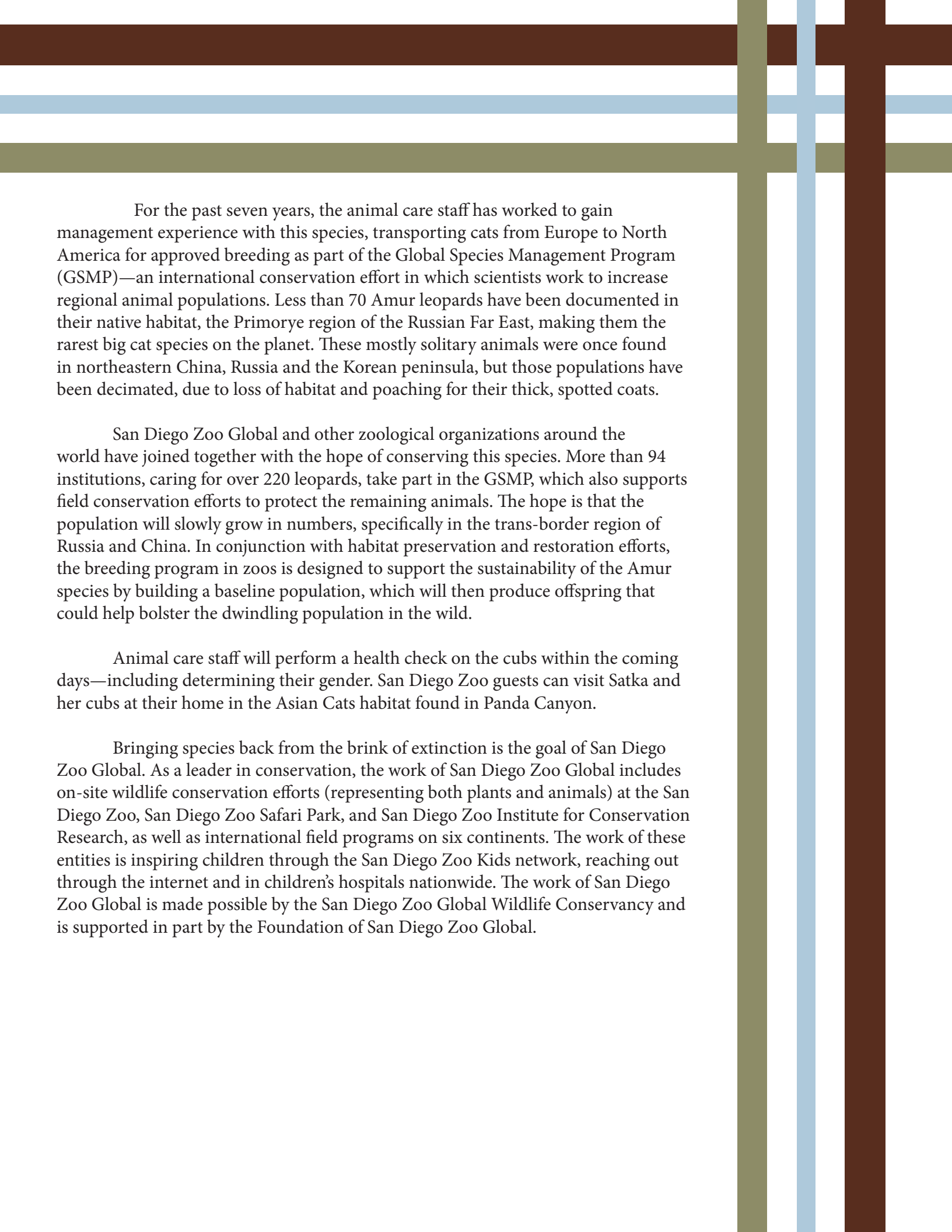


Rare Amur Leopard Cubs Born at the San Diego Zoo



The San Diego Zoo has achieved another milestone this spring, after 4-year-old Amur leopard, Satka, (pronounced Saat Ka) gave birth to two cubs—the first time Amur leopard cubs have been born at the Zoo since the rare species first arrived in 2011. The cubs were born April 5th and are now spending more time outside of their den and in public view. Over the past few weeks, Satka has been introducing the young ones to their habitat, slowly allowing them to explore, climb and play, before corralling them into the den for feedings or to rest. Animal care staff said that so far, they haven’t had much contact with the cubs. Instead, their objective is to allow Satka to take the lead in their care.

“Our strategy for managing these cubs is to remain very hands off and let their mother continue to do the great job she’s been doing,” said Todd Speis, senior mammal keeper at the San Diego Zoo. “As the cubs get older, we will begin to build a relationship with them. But the highest priority right now is the relationship they have with each other and with their mother.”



For the past seven years, the animal care staff has worked to gain management experience with this species, transporting cats from Europe to North America for approved breeding as part of the Global Species Management Program (GSMP)—an international conservation effort in which scientists work to increase regional animal populations. Less than 70 Amur leopards have been documented in their native habitat, the Primorye region of the Russian Far East, making them the rarest big cat species on the planet. These mostly solitary animals were once found in northeastern China, Russia and the Korean peninsula, but those populations have been decimated, due to loss of habitat and poaching for their thick, spotted coats.

San Diego Zoo Global and other zoological organizations around the world have joined together with the hope of conserving this species. More than 94 institutions, caring for over 220 leopards, take part in the GSMP, which also supports field conservation efforts to protect the remaining animals. The hope is that the population will slowly grow in numbers, specifically in the trans-border region of Russia and China. In conjunction with habitat preservation and restoration efforts, the breeding program in zoos is designed to support the sustainability of the Amur species by building a baseline population, which will then produce offspring that could help bolster the dwindling population in the wild.

Animal care staff will perform a health check on the cubs within the coming days—including determining their gender. San Diego Zoo guests can visit Satka and her cubs at their home in the Asian Cats habitat found in Panda Canyon.

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Why Rocky 3 is the *BEST* trainers movie ever

Grey Stafford, PhD

IMATA past president

Do anything long enough and sooner or later those around you will start to pick up on your mannerisms and favorite phrases, or what my younger colleagues refer to as “stuff” my dad would say.” Based on their responses, one of my favorite idioms to use in a training environment appears to be “eye of the tiger,” in reference of course to the greatest training movie ever, Rocky 3.

For those that may have missed the 80’s, the third film opens with our everyman hero having achieved repeated wins, fame, riches, and glory as the unlikely World Heavy Weight Boxing Champion. However, his world comes crashing down after a series of safe decisions by Rocky and those around him lead to a humiliating and painful defeat at the hands of a younger, hungrier, and bigger opponent. The blue collar, street fighter from Philly had lost his competitive edge due to age, self-doubt, and most of all, fear over losing what he had earned. Despite all his past success, this crushing defeat (and serious beating) caused him to call into question the legitimacy of everything he had achieved, including being the world’s best.

Of course, if that’s where the movie ended, it wouldn’t be much of an animal training film, never mind the greatest of all time. So, what are some of the training takeaways from Rocky 3, and why does the message behind eye of the tiger have everything to do with caring for animals in our increasingly anti-zoo, anti-contact, hyper-activist, and appeasement climate?

It’s no secret that the narrative about modern zoos and aquariums has taken it on the chin in terms of public perception over the past decade. Predictably, most of the criticism has been sweeping in form, by lumping zoos and aquariums, animal trainers and training programs, and all shows or encounters with one broad stroke, and the same old tired message: animals in human care bad. And, judging by the steady stream of new and proposed restrictions on public display facilities around the world, it’s having a cumulative effect in the minds of an uninformed public and media, state legislators and Congress, regulators, and even a number of zoo professionals that frankly, ought to know better.

I don’t know what is more nauseating, the bogus storyline promulgated by some CEO’s that “the public has moved on” from public display or seeing unworthy and unqualified third party extremist organizations afforded the credibility and trust that our animal care and training community once held and fought hard to earn. And, in what I can only describe as a professional punch in the gut, it was painful to witness my zoo trade association of nearly 3 decades eagerly hand the title of welfare champion over at its annual meeting last year to the likes of that pretender organization, HSUS. A trade association is supposed to protect, promote, and defend its members, not invite the fox into the fold, right?

After enjoying the public’s support for decades of husbandry, research, conservation, breeding, education, and yes, family entertainment success by the zoological community, like Rocky, it’s easy to feel defeated and to question our past contributions or future value in the face of such opposition. The resulting spread of self-doubt among caregivers the past few years has been palpable. Why don’t people see how important our work is? Are we still relevant? Maybe it’s time to change careers? How could anyone think I would abuse the animals to which I devote most of my life? What do we do? Who is fighting for us? Maybe the voices are right and we should give up.

All this insecurity, despite another year of record attendance at zoos and aquariums? What about the historic manner by which zoos and aquariums (i.e., represented by ZAA, IMATA, AZA & AMMPA, ABMA), researchers and veterinarians, keepers and trainers, and notably, not activist groups, mobilized at an unheard-of pace to raise funds, equipment, and to provide the human talent needed to support the VaquitaCPR effort late last fall? The “anti” crowd certainly didn’t raise money to help the vaquita. No, they stood on the sidelines again, with disapproving arms folded, all the while complaining, “zoos are the problem and ought to do something to save wild species like the vaquita, but don’t do this or that...” And when our community’s worthy efforts to save the vaquita were met with the harsh reality of how little we know about this small porpoise with a population numbering in the teens, predictably, these same activists shouted from the safety of the cheap seats, “we told you so,” all the while grifting their unsuspecting followers.

The truth is our critics are good at what they do. From fundraising and lobbying, to trolling anyone with whom they disagree and sponsoring legislative restrictions, to mobilizing armies of online followers to submit public comments to USDA, vote in media polls, boycott products, or flood the inboxes of elected officials, it is not hard to see why they are so effective. While we are focused on preserving animals and habitat, they are uniquely focused on eliminating us. Sadly, it’s easier to criticize and destroy than it is to build and sustain. However, before anyone hangs up their clickers or whistles, maybe we should cut out all the current noise and memories of past glory and learn to deal with the “Alt Fact” reality in which we now live. Like Rocky, let’s each try to go back to the beginning and focus on the reasons why we became trainers-- reconnecting deep down with what motivates us still to provide the best lives possible for animals. Perhaps the solutions we seek, and the way forward for animal care and training professionals, modern zoological facilities, and the species we all hope to preserve isn’t about the size or strength of our opponents, or the times we stumble, but about the gut check we all embrace every time we work with another species in whatever arena we are fortunate to find ourselves.

Think about it. Who among us has not felt uncertain at some point about a training scenario? What about the courage needed (whether you felt it or faked it) the first time you took a flighted macaw to stage? What if it flies away? Or the time your supervisor impressed upon you in the morning meeting how important it was to get that voluntary, fasted blood on a very sick animal. It’s the fourth day in a row collecting a sample. What if she kicks out or I miss the stick? The sources of anxiety and fear aren’t limited to the animal situation in front of us: How do I train this behavior? I’m an introvert on stage in front of thousands? I’m one small voice. How do I defend the importance of training and modern zoos against the cacophony of vocal opponents, Congress, CNN,... my family? If I screw up, this animal could hurt itself, me, or others. Why did I bridge that? The behavior is not advancing and... I don’t know what to do next. What will my team think of me?

The scenarios might differ, but the courage and resolve needed to humbly engage them day after day are the same. In the end, even with a mentor (or manager) literally standing in our corner, eventually it’s just us, alone in the ring. And that calm, kind confidence-- not arrogance and certainly not selfish vanity- is what I hope trainers will always find a way to draw upon for themselves and their profession.

Eye of the Tiger.

My belief that professional reinforcement-based trainers are up to any challenge the zoological community may be facing today is not wishful thinking. Time and again I’ve seen it in action. A few years ago, I helped build a new facility and trainers were among the first employees I hired, even before there was a habitat or much else. Truth be told, throughout organization building, construction, and launch, I leaned on the training staff, just as I had numerous times at previous facilities. I asked far more than I ever would have asked of non-trainers. Never gave it a second thought! Never doubted their ability to persevere and get any job done. Why? What was the basis for such certainty then and now? The answer goes to the very nature of selflessly training animals to improve their lives and well-being.... It’s these same qualities that led zoo professionals to

band together to evacuate countless animals at other hurricane flooded facilities in Texas or to put aside their own safety and comfort to ride out destructive storms throughout the Florida Keys and Caribbean to ensure their animals would be OK. Training professionals are simply some of the most determined people I've ever known.

What then does the immediate future hold for all of us that care about the future of modern zoos and aquariums? Safe to say, no one else is going to swoop in to save the entire community but those of us in it. No longer can we simply remain in our training bubble with the animals we love as if what happens in California doesn't impact Florida, Texas, New York, Mexico, France, Canada, and so on. We must do more or we will continue to lose the legal ability to work with animals, one species or facility at a time. We have to engage at all levels of our profession including directors, board members, stockholders, benefactors, companies, associations, coworkers, and our guests to let them know, for example, why blindly partnering with activist groups like HSUS, rather than fellow zoos (from the other associations) working to improve, is a fool's errand. Some colleagues have wondered why I'm so intransigent on this point. The answer is simple: HSUS' insincere words don't match up with their behavior. For example, SeaWorld partnered with them nearly 2 years ago and yet, the HSUS website states to this day, don't visit dolphin swim facilities. Recently, AZA created a self-inflicted mess for its own facility members in NJ by supporting a legislative ban on traveling animal shows (originally based on one notable elephant) with HSUS. Not surprisingly, the wording in the law that actually passed had such vague and encompassing language that zoos realized their education outreach programs featuring dozens of species beyond just elephants would be prohibited! The law was not signed by the outgoing governor, but the bill has been resubmitted and is expected to pass again with the same broad restrictions. Both of these examples illustrate why groups like HSUS are untrustworthy—their words say one thing but their actions demonstrate quite another. Thus, there is no common ground possible if their end game is the elimination of everything we do including public display, basic research, contact, training, and managed breeding of wild and endangered species.

In trying to help a former champion find his way, Rocky's opponent-turned-friend, Apollo Creed wasn't suggesting "eye of the tiger" meant such animals never experience fear, as those of you who work with them can attest. It was just the recognition that no matter what may be going on inside or around them, they are still and always will behave with the fierce power and confidence as only a tiger can. All the more reason then for us to unapologetically draw upon our core values of reward-based training and to use boldly all the tools, technology, and avenues available to shape the desired behavior (e.g., support good zoos) we want to see in others, one or one million at a time.

The rest is just topography.



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ONE IS NOT LIKE THE OTTER

Meredith Swortwood

The Columbus Zoo and Aquarium

When you're growing up, it's hard not to compare yourself to others. For me, I thought of my sisters when I looked at myself. Between them there is a perfect Math SAT score, a Master's Degree, and a PhD in Chemistry. While I did fairly well in school, I decided that animal poop should be the driving force behind my profession.

As comparing ourselves to others is natural, it is normal to do the same when working with animals. Our mind naturally refers to past training experiences and applies strategies to the present training session. While this can expedite our training, it can also cause confusion. For example, if Tiger A walked into an injection chute on the first session, we may expect Tiger B to walk in just as quickly. Perhaps we continue to call Tiger B towards the chute and find ourselves frustrated when he or she does not move towards it. This type of frustration can hinder the training process and lead to further confusion for both the animal and trainer. I can think of a time when my own expectations interfered with my animal interactions.



Exhibit A: Yin and Yang (Image 1), a pair of male Asian Small-Clawed Otters (*Aonyx cinereus*), who are a part of an ambassador collection at the Columbus Zoo and Aquarium. Their role is unique in that they travel off-grounds to participate in conservation programming. As babies, we frequently took them together to presentations, but as adults we incorporated taking them off-grounds independently of one another.

During programs when we would reach down towards Yang, he would stand up half way or completely stretch into our arms. He usually came walking out of his crate with confidence and would guide himself into our arms and lounge while guests gushed over him. Yin typically laid on his back and cradled into our bodies- with the occasional rogue hand exploring our uniforms. Although Yin appeared comfortable being held, we noticed that his behavior was different when picking him up. While Yang reached toward us, Yin would more often than not refuse to leave his crate in behind the scenes areas. This behavior looked like an otter peeking from the opening of the crate, hands reaching towards him, and moving himself back inside, which was sometimes paired with sharp vocalizations. When he did come out, he didn't completely back up inside the crate, but didn't reach out to us in the same way that Yang did. We grew frustrated because as the number of programs Yang attended increased, Yin's by comparison decreased. In discussion we said, "Yang came out on my program today, but yesterday Yin didn't. I don't know why! It was weird. He wouldn't come out of the crate, and I couldn't pick him up." What did Yang's behavior during programming have anything to do with Yin's?

During the summer of 2015, Yin hardly attended any programs. The push for action came after planning to train both boys to do a voluntary x-ray behavior. During our sessions, we would pick up each otter and carry him over to the lobby where we had a table set up for training. Yin felt tenser than in the past, and he would at times push his mouth and teeth against my arm. I was nervous that this would lead to biting. We decided as a team that we wanted to enact a change- to create a new plan for Yin.

The first phase of our plan to revamp Yin's routine was to set up solid foundation behaviors such as stationing at home (Image 2) and in a crate (Image 3) and then moving to and from these points voluntarily. We established clear communication using lake smelt from his diet as reinforcers. We further built our trust account with Yin by doing two things: we only operated the doors to his crate or house when he was positioned in the cued station, and if he broke station we did not prevent him from doing so or reach down to move him. The crate training was challenging as there was history being in there, but soon enough we were able to carry the crate into the lobby where he could enter and exit from a table.

After building this foundation, we planned Yin's future. We wanted to continue our work with him as it would benefit not only our conservation programs, but more importantly it would give Yin more choices in his routine. As explained before, Yang would stretch towards his trainers when our arms reached out to him. How could we set up a behavior that allowed Yin to do the same thing? The answer was to give Yin the choice to make all the moves towards us.

The arm chute (Image 4) was introduced on the table in the lobby. The trainer's arm remained stationary while Yin was reinforced for moving into it. Imagining the arm as the anchor and a fluid pick up as the final behavior, we reinforced Yin for approximations up the trainer's bicep, up the shoulder, and then for flattening his body along the front of my body. With approximations, I adjusted my standing height to be taller, which in turn extended the arm chute (Image 5). A second person was incorporated to help prompt further movement and to reinforce him, and then faded out upon completion of the behavior. Repeated approximations of light squeezes from my arm and then small lifts were reinforced as Yin simultaneously climbed upwards. The last step before he was completely off the table was Yin lifting his back-left foot up and onto my body (Image 6). If Yin did not lift his back foot, I did not lift upwards.

After 3 months of building the foundation behaviors and completing the pick-up, we found Yin in our arms again. Seeing these successes we were further inspired to generalize his pick-up behavior to give him even more choices in free contact scenarios. After demonstrating the pick-up behavior from the table in multiple new areas, we applied the arm chute to other daily routines. First, we mimicked the arm chute as I kneeled on the ground in front of the otter house.





Yin was reinforced for walking up to me, up my legs, and into the arm chute (Image 7). He quickly offered the pick-up after 2 sessions. Secondly, we applied the arm chute to Yin leaving the crate. This step was the most challenging part of his training as we were working against two years of reaching into the crate. Through slightly different body positioning and the incorporation of a second person to again reinforce for moving upwards, we found that this arm chute required more climbing from Yin. But his back-left foot lifting remained the last step before the full pick up was offered. As this was completed, we moved the crate into one of our vans (Image 8), which we typically worked out of during programming. The history of being in the van offered another challenge that we worked through with continued repetitions and very small approximations. If Yin did not climb into the chute and lift his back leg up, we did not push the behavior by reaching in or scooping his body. By sticking to our criteria very closely, we continued to boost our trust account with Yin and extended the pick-up behavior to two more trainers (Image 9).



In December of 2015, Yin attended his first educational program in over 6 months. Before this we brought him on several programs as an extra animal to set ourselves and Yin up for success. We alleviated pressure this way and did not feel frustrated if he decided not to offer the pick-up. He attended programs with his other two trainers, and we continue to keep this group very small to remain sensitive to Yin's needs.



On some days Yin will not station in his crate and chooses to walk around touching enrichment, and on others he runs into our laps. We empower him with the choice of participation. He may not come out on every program like Yang does, but that's ok. I may never understand chemistry, and that's ok too. I've mastered the art of otter communication, and I scrub a mean pile of poop.



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Here For a Limited Time Only: Training at the Maryland Zoo Hospital and Quarantine

*By Lindsay Simpson, Hospital Keeper, Kaitie Kessler, Hospital Keeper,
and Julie Grove, Area Manager/Animal Behavior and Training Specialist*

Animal training is a major component of animal care in all areas of the Maryland Zoo, including now at the zoo hospital. It has always been a goal to incorporate this same level of training as soon as animals arrive into quarantine. Those first thirty days are critical to an animal's adjustment, and training can greatly affect that experience in positive or negative ways. In the fall of 2016 staff responsibilities were restructured, and the zoo hospital created a team of animal keepers solely responsible for the hospital collection. This transition created the perfect opportunity to introduce training programs as part of the quarantine keepers' routine. The training program was immediately successful and resulted in improved animal husbandry, smoother transitions for the animals, and cooperation across departments. I look forward to many more training accomplishments for our newest additions...even those engagements that are for a limited time only.

One animal leaves and the next one comes in. Starting back at square one is the challenge facing hospital keepers as we develop and carry out training plans for animals in quarantine. Incoming animals generally spend a thirty-day quarantine period at the zoo hospital under close observation. Fecal testing, blood work, radiographs, and a thorough exam under anesthesia are conducted before an animal moves to its permanent home within the zoo. Quarantine animals require frequent weights, are handled more often for medical checks, and are not intended to stay at the hospital long-term. Due to the nature of quarantine, training is conducted for very practical purposes and allows animals to assist in their care. The goal is not only to reduce stress, but to make participation enjoyable and reinforcing. Hospital keepers also care for sick or injured collection animals, but many of these patients do not make good candidates for training due to their health status.

Because the animals only reside at the hospital temporarily, hospital keepers have limited time to train deliverable outcomes. Our work with a wide variety of species presents an additional challenge. Individual variation within a species, due to their different backgrounds, further complicates the process. We communicate with each animal's previous facility to make the transition as smooth as possible, but the animal may have been managed in a way that our quarantine setup does not allow. Recently rescued or rehabilitated wildlife are especially wary of human contact and face an even more drastic change than those moving from another zoo. Regardless of where they come from, quarantine animals face major adjustments in a short time.

Training is done on a case-by-case basis. Decisions are based on the individual animal's temperament and long-term management plan. For example, we prioritize training more for an education animal than for an aviary bird. Often an animal's behavior will tell us how to proceed or if we need to modify our plan. Some animals may find our presence distressing, so the best option is to give them a quiet space, clean quickly, and interact with them as little as possible. For these individuals, the temporary stress associated with being caught up for weights or exams is less than that caused by forced interactions multiple times each day.

Many of the animals we receive have no training history, so it is essential to start building our relationships as soon as the animal arrives. We treat every interaction as a learning experience, both for the animal and ourselves. The first step in many cases is hand feeding. Hand (or tong) feeding allows us to deliver reinforcement in a timely manner and to pair a bridge with a primary reinforcer. Establishing a bridge opens the lines of communication between trainer and animal. From there, we can begin to focus on “the big three”: target, scale, and kennel. Targeting is the first step in teaching the animal how to train. Investigating a novel item is a natural behavior, and is something that can quickly be approximated. Thus starting with a target gives the animal a simple behavior with a high probability of success. Once this behavior is established, the animal is comfortable around its trainers, and understands that the bridge translates into food, we can use the target to shape other behaviors. In quarantine especially it is important to obtain frequent weights to monitor the health of the animal, so scale training is always one of the main goals. Since the animals we care for in quarantine are temporary residents, we plan for their departure from the moment they arrive. Training a voluntary kennel or trailer behavior makes for a smoother transition out of quarantine.



We attribute much of our success to the frequency and consistency of our training sessions. Training is conducted twice daily, and each animal has the same two primary trainers. Strong communication between keepers is crucial. Together we form a plan, check in about any adjustments, keep detailed training notes, and frequently watch each other's sessions and give feedback. We work closely with each other, but hospital keepers are not in it alone. Our co-workers readily participate when we need extra people for training, and when we hit roadblocks other staff members are quick to offer help. On a few occasions, vet staff and animal managers temporarily extended an animal's stay so trainers could finish a behavior that would allow us to transport the animal voluntarily, eliminating the need for immobilization.

From the animal department to vet staff to commissary to facilities, there is an incredible amount of support that empowers us to accomplish our training goals. Before the animals even arrive at the zoo, hospital keepers shadow the area where the animal is going to see the setup and routine. We solicit input from the animal's future keepers about their preferred bridge, target, size and style of scale, and, if they currently house that species, favorite enrichment items and training treats. We take their suggestions and alter our design to ensure training at the hospital will translate smoothly to their new home on-grounds. Some modifications to quarantine holding areas require help from the zoo's facilities team, who are very accommodating with time-sensitive requests. Toward the end of quarantine, the animal's future keepers observe training at the hospital. Sometimes after the animal moves, hospital keepers will continue their training for a short time to ease the transition. This collaboration between teams is an important factor in maintaining consistency, and invaluable to the success of the hospital's training program.

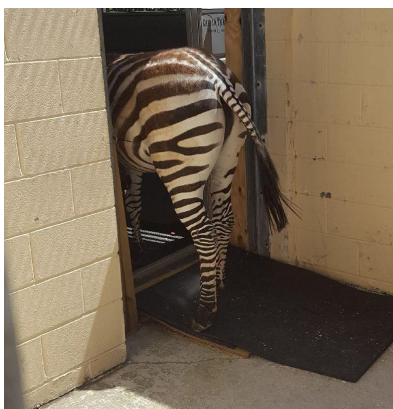
Case Studies

Arctic Foxes: One male and one female, approximately 1 ½ years old, transferred to the zoo hospital for a 3-month stay while their exhibit was renovated. Both foxes were already trained for an “up” behavior: standing on hind legs with front paws on mesh. At the hospital, we introduced a second person and shaped a “touch” behavior, resulting in successfully clipping all nails on front feet of both foxes.

Bobcat: A six-year old female arrived in quarantine while a permanent exhibit was under construction. Though timid and difficult to shift when she first arrived, the animal began to solicit interactions with keepers once the training program began. She successfully kenneled in a metal squeeze cage and was hand injected for her quarantine exam. We continued training in the squeeze cage to prepare for transfer to the exhibit, but the bobcat was apprehensive after her exam and would not fully enter the squeeze. We switched the metal cage for a plastic kennel, which increased the bobcat’s comfort level. We also experimented with other types of high value reinforcers, but she continued to hold one foot outside the kennel, preventing the door from closing. We opportunistically shut the door when the bobcat fully entered the crate and transferred to section, thereby avoiding darting for the move.



Zebra: An 18-month old female plains zebra was previously managed as part of a herd with limited human interaction. During the first four weeks of quarantine, hospital keepers trained “target” and “scale” behaviors. Due to time and materials restrictions, the trailer was introduced at day 28, and quarantine was extended to six weeks. The behavior deteriorated after the door was shut during training, and the first attempt to have her trailer voluntarily was unsuccessful. We continued training sessions twice daily, and the second attempt to trailer voluntarily, one week after initial try, was successful. We were this able to avoid anesthesia for transport.



Bobcat: A six-month old male arrived at the zoo as a wildlife rescue. He spent several months at the hospital while a new bobcat exhibit was built and was trained by both hospital keepers and exhibit keeper staff. After moving to his permanent home in the Maryland Wilderness section of the zoo, he returned to the zoo hospital due to an injury to his left rear leg. During hospitalization, we were able to capture a “butt” behavior. Vet staff were then able to get routine visuals on the site, flush the wound daily, and remove sutures through the mesh over the course of several days, avoiding an additional anesthetic procedure.

2017 Hospital and Quarantine **Training Successes**

Arctic Foxes*: Voluntary nail trims

Badger*: Target, scale, kennel

Bobcats*: Target, sit, lay down, stretch, squeeze cage for hand injections, kennel for transport, “Butt” for suture/staple removal

Crane: Station, trained to eat from deli cup on pole to feed two cranes separately

Duiker: Scale

Grizzlies: De-sense, improved comfort level around people

Ostriches: Target, scale

Prehensile Tailed Porcupine: Target, station, kennel, touch de-sense, intro to handling for programs

Ravens: Station (to separate ravens for medicating)

Sitatunga: Target, scale, trailer

Tawny Frogmouth: Step up, perch, scale, trainer-to-perch flights, “touch” for keel feel/nail trims

Warthog: Desense, increased comfort level around people

Zebra*: Target, scale, trailer

**Indicates stay longer than 30 days*

Starting From The Beginning: Marabou Stork Training in a Multi-species Exhibit

Kayla Moreno – Animal Care Specialist
San Antonio Zoo

I am fairly new to this amazing zoological world compared to most in my field. Having begun my career as an intern six years ago. Over the first three years, I worked with various institutions, people, and animals. During that time I learned many things, but none that could prepare me for my first full-time position at San Antonio Zoo.

I have grown into a more dependable aviculturist here, working with an extensive avian collection and becoming more confident in my observation and time management skills. Nothing has made me work harder or learn more about myself than when we received four young Marabou Storks (*Leptoptilos crumeniferus*).

I have been working with this group for two years now and, like with all things, there have been ups and downs. After about a month of living in their new exhibit, another aviculturist and I started writing a training plan for these new birds. Our goal was to station train all four so, eventually, we could get voluntary weights. Since they lived on exhibit and are fully flighted, our first goal was to build the trainer bond and see what motivated them to come over to us to train inside the free flight aviary.

We started hand-tossing their various diet items to see what they would catch. While they would catch fish and Bird-of-Prey (BOP) meat mix, they never really seemed excited about it or eat it right away. However, they would chase each other around the exhibit for the rat.

Once we figured out the best reinforcement (rodents), we picked a stationary spot for the trainer to stand and started training the bridge. Our visual cue to indicate the beginning of a training session was a specific bait bag (red pail) used to hold the training reinforcements.

Because this was a new behavior, only the primary trainer would be training/feeding out rodents until the bridge became established. While only using the rodents as the reinforcement, the area keeper would feed out fish and BOP in the morning and the trainer would train in the afternoon. Most days the area keeper and trainer were one and the same, however, during weekends the secondary would step in and train. This required the primary and secondary to communicate with each other on how training was going and where everyone was in the training plan.

Challenges:

With the trainer's position set, reinforcement established, and start-of-session cue ready, we continued to the next step, which was to train the bridge. In this exhibit, we had a pair of White-necked Ravens (1.1, *Corvus albicollis*) living with the four Marabous (2.2), which caused a challenge with using the same bridge for both sets of birds. We decided two separate bridges was a better plan to minimize confusion and overlap between the different species trainings. For the ravens we used the whistle and for the marabous we started with a clicker. However, to free up both hands, we fell back to the word "GOOD" for the marabous. Our hope was that each set of birds would only respond to their own bridge and not engage in the other species' training time.

Unfortunately, the challenge continued. The ravens would frequently come over to disrupt the Marabous' session. This caused me to adapt the time and intervals of each training session, as well as creating an enrichment item/reinforcement that could keep the attention of the ravens off exhibit in a shift cage during Marabou training.

The Marabou training was slow at first, mostly because we only used one large rat as the reinforcement and only trained once a day. As time went on and the trainer-to-bird relationship grew stronger, the birds started to feel more comfortable and moved closer to the stationary trainer. Three of the storks were hand-reared (1.0 metal band, 0.1 green band, and 0.1 red band) while the fourth stork (1.0 green band), was parent-reared. This caused two separate paces to be set for the group with the hand-reared birds being quicker to participate than the parent-reared individual.

As training continued, 1.0 metal band, 0.1 green band and 0.1 red band all figured out where they felt comfortable standing during training: 0.1 green band on the trainer's right and the other two on the lower shelf in front of the trainer (1.0 metal band on right and 0.1 red band on left). The two on the lower shelf exhibited more dominant behaviors and many times would rush the others for the reinforcement.

After about three or four months, the fourth stork (1.0 green band) finally started to engage more by approaching the trainer on the left. Now that all four storks had a central location, we added large rocks to the exhibit to allow us to ask each bird to station to a specific location.

To lengthen the training sessions, we started using smaller reinforcements such as super worms, whole or half mice, and smaller rats. After using these smaller reinforcement items, we observed they wouldn't abandon their training session as often to play with the item in a water tub or steal from each other.

As we continued training, the storks figured out that food was in the red pail, causing them to anticipate the reinforcement. The birds would either step toward the trainer or snap their bills trying to get the reinforcement out of the trainer's hand. I learned that I had to keep an eye on each marabou and not have any reinforcements in my hand for any length of time.

To resolve the snapping/approaching behavior, a "Back up" command was incorporated to encourage moving away from the trainer before getting the reinforcement. The cue was a flat hand pressed towards the bird and a verbal "Back up". Both right and left hands were used for this cue, but I observed more anticipation/unwanted behavior for the reinforcement when using the right hand instead of the left. The cue would be with the left hand only, with a goal to be able to use either hand to cue the behavior.



Due to anticipation and my comfort level with each stork, “Back up” now became my primary behavior to train, with station training becoming a secondary goal. My biggest culprit of anticipating the reinforcement was 1.0 metal, so he was the one I focused on with this behavior, as well as reinforcement for staying on his station while the other birds received reinforcements.

The three other storks learned their respective stations quickly, but the “Back up” behavior was a little more difficult. They would sidestep instead of stepping backwards, or completely ignore the cue. This was another speed bump, because while each was hand-raised, they all reacted to the trainer and cue in different ways.

For all four, I would give the “Back up” cue and wait for the bird to take two steps (both feet move) backwards, bridge, and then reinforcement. Each bird has made progress in the training plan, but due to individuality of each bird they are all at different stages.

1.0 metal band is the dominant male and stands on the right side of the lower shelf in the exhibit. He is also the only one of four that will station consistently. The “Back up” command was the most difficult for him to learn due to being so heavily reinforced for stationing. It took a lot of patience, but after a little over a year, he has finally learned the behavior and will “Back up” after a 2 – 3 second pause after the cue is given.

0.1 red band is the dominant female and stands on the left side of the lower shelf in the exhibit. She is good about knowing her general location, as well as switching with 1.0 metal when asked. So far, with the exception of one instance, she hasn’t stood on her station, and is still working on the “Back up” behavior, as she sometimes ignores the cue altogether.

0.1 green band stands on the trainer’s right and is good about the “Back up” behavior, but will sometimes sidestep to the right. This has caused me to reposition myself and ask again. She mostly stands on my right but farther back from the pair on the lower shelf. She has stood on her station with one foot, but it will probably need to be moved further from the 1.0 metal stork’s station.

The fourth bird, 1.0 green band, stands on the trainer’s left and is the most consistent with the “Back up” behavior. I believe this is because he was parent-reared and would already move away anytime he was approached. At first, he would move more frantically away from the trainer, but as we moved through the steps he learned to slowly move back.

As a trainer and aviculturist, I am really proud of the challenges and obstacles I have overcome with this group of birds. They are smart and inquisitive individuals, inside and outside of training. I love coming up with different enrichment items and ways to present old items in a new way. I look forward to completing this stationing behavior by the end of the year.





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