



Engage

Fall 2022



The Animal Behavior Management Alliance.

President's Letter

The Animal Behavior Management Alliance has had a busy 2022! We had a second virtual conference back in April, with some incredible guest speakers and presentations. As soon as the conference wrapped up, we began organizing Behavior Month; which has so much amazing content, with contributions from around the world. Behavior month kicks off October 1st and will have something every day to celebrate all things behavior. On March 5th-10th, we will finally be back in person again with an exciting joint conference with IMATA in Atlanta. This joint conference will be a celebration of both organizations that will be unlike any other conference you have attended. There is so much to look forward to in the coming months. We appreciate your continued support of ABMA and we hope to see you in person soon!



Kelly Elkins

2022-2023 ABMA President





About ABMA

The Animal Behavior Management Alliance (ABMA) is a not-for-profit 501(c)(3) corporation with a membership comprised of animal care professionals and other individuals interested in enhancing animal care through training and enrichment. The ABMA is intended to be nurturing and informative, and was created to serve trainers, handlers, and keepers of animals, irrespective of species, with information and assistance in the behavior management of their charges.



Our Mission

The Animal Behavior Management Alliance (ABMA) continually strives to advance intentional and enlightened behavior management to improve the lives and welfare of all animals.



Our Vision

To be a global leader dedicated to advancing animal welfare through excellence in behavior management.

Our Core Values

- Behavior management is an essential component of animal welfare.
- Environmental enrichment and positive reinforcement training are highly effective strategies for managing and modifying behavior.
- Goal-based enrichment, designed to offer animals behavioral opportunities, is an essential component of all animal programs.
- Positive reinforcement training is our most effective and ethical method of behavior modification.
- Human and animal safety must be at the core of an animal behavior management program.
- Learning should be conducted in a nurturing and non-threatening environment for both animals and people.
- Science-based methods of assessment are a valuable tool for evaluating, refining, and advancing behavior management strategies.
- Behavior management can advance conservation by helping to mitigate human-animal conflict in wild populations, facilitating in situ conservation efforts, and maintaining behaviorally and physically healthy captive populations.
- Pro-active behavior management is an essential component of responsible animal care since learning is always occurring.
- The sharing of knowledge and new ideas is fundamental to advancing animal behavior management.



ABMA 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. 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.

Board Members

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An Orangutan Birthing Plan: How it Delivered Success

Tara Glowala and Amanda Carroll, Zoo Keeper Grade 3, Toronto Zoo

The Toronto Zoo's mission is to connect people, animals, and conservation science to fight extinction. This past year our zoo prepared for the arrival of our first orangutan to be born in over 15 years! Sumatran orangutans are critically endangered, with less than 6000 remaining in the wild. The Toronto Zoo is the only facility in Canada to house orangutans, and as a result, is committed to sustaining the ex-situ (under human care) population by participating in the Sumatran orangutan SSP.

The zoo lost its adult breeding male in 2010. After many years without an adult male, the SSP recommended that a 15-year-old male that was born at our zoo be introduced to Sekali, a 29-year-old female, for breeding. Through these efforts, our zoo celebrated the arrival of a healthy, male Sumatran orangutan on April 8, 2022.



The Toronto Zoo orangutans have all been trained for voluntary urine collection. They are asked to press up against the enclosure mesh and urinate into a receptacle held by the keeper. This training enabled the keepers to track Sekali's menstrual cycle by using Chemstrips, a urinary analysis strip that detects trace amounts of menstrual blood, as bleeding is usually light and not always apparent in the species. During the collection of urine, the keepers were able to visually monitor her labium. Orangutans start to have a swollen labium between 2-4 weeks after conception, which proved to be a handy tell-tale sign that Sekali was pregnant.

Tracking Sekali's menstrual cycle enabled keepers to know when she would ovulate, and predict her next menstruation. This allowed us to determine the best time to put Sekali and Budi, our male Sumatran orangutan, together as they didn't cohabitate prior to introductions. She was expected to menstruate between August 23-25, 2021. This was not observed, but keepers noted a slightly swollen labium on August 25, 2021. A positive result with an over-the-counter pregnancy test was obtained on September 2, 2021. Our Reproductive Science Department confirmed Sekali's pregnancy by tracking her hormone profile through urinalysis of the daily samples that were collected.

This pregnancy would be Sekali's second offspring, 16 years following the birth of her first. Despite the fact that Sekali had given birth previously – her first birth occurred naturally without medical intervention and she successfully nursed her first offspring – the orangutan team moved forward with a birth and training plan for several maternal behaviors. The plan was used to train Sekali, but

to foster-train our other 0.3 orangutans as well; Puppe, age 55, Ramai, age 36, and Jingga, age 15. Staff wanted to make every effort to ensure Sekali would have the best conditions for a safe and uncomplicated birth. Keepers decided that each of these females would be the best option in different situations. Puppe was a very experienced mother that would cooperate best in giving the baby back to keepers, making her the best short-term foster mom. Ramai might not have been as willing to return the baby, making her the better long-term foster mom. Jingga, having no experience with raising any offspring, was a backup if our other two foster moms didn't work out. The goal was to have the baby raised by an orangutan, whether it was Sekali or one of the other females as a foster mom, with or without keeper help. Keepers wanted to be prepared for possible scenarios: Sekali having a difficult birth and unable to care for the baby immediately; not being able to breastfeed; or rejection of the baby.

Sekali's previously trained behaviors also assisted keepers in preparing and monitoring her through her pregnancy. Forehead temperature checks allowed us to rule out a fever as a result of infection during pregnancy (this pregnancy was during the COVID-19 pandemic) when we saw her become more fatigued as her pregnancy progressed, or afterwards, possibly indicating a mastitis infection. Regular weighing in a scale pen and presenting different body parts for body scoring evaluations allowed us to ensure her caloric intake was adequate. If her weight gain was excessive, we would monitor for gestational diabetes. Presenting her shoulder for injectable intramuscular medications and/or anesthetics was an essential behavior that we practiced in the case of a difficult labor, where veterinary staff may need to intervene.

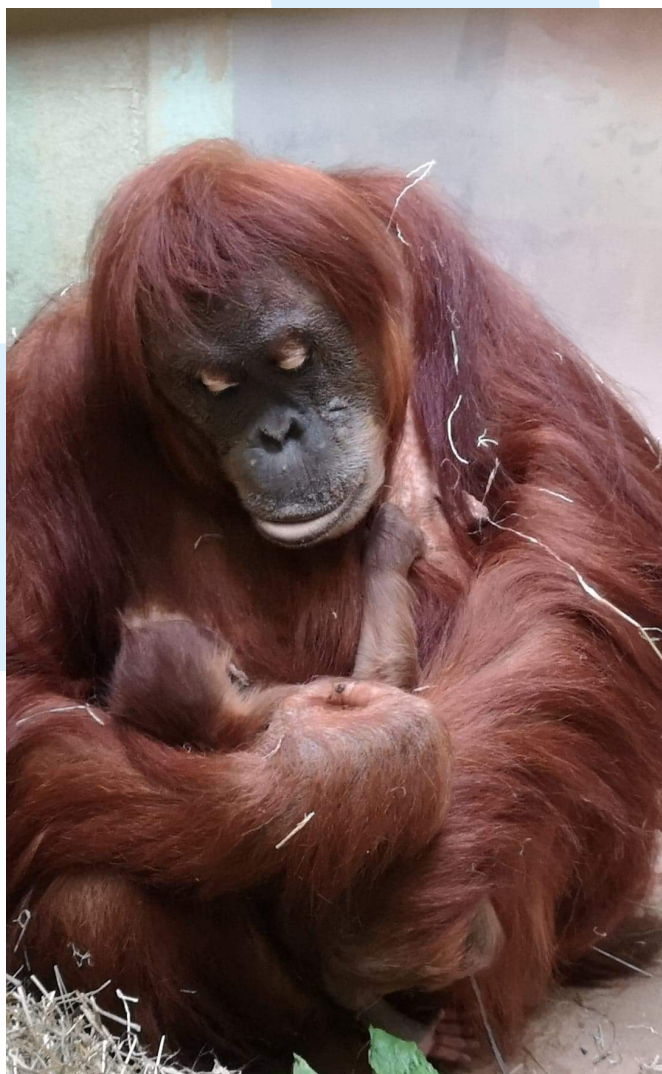


In preparation for the pending birth, the team drew up shaping plans to train a series of maternal behaviors. One was to bring the baby to the mesh for bottle feeding. This behavior was essential in case the baby needed supplemental feeding from keepers, but allowed the baby to be cared for by mom or one of the possible foster moms. This could be used in any difficulties latching or suckling, if Sekali did not produce enough milk, or if Sekali needed a Cesarean section or had other medical complications during or after birth that didn't allow her to breastfeed. Additionally, scale/squeeze cage training was maintained and highly reinforced leading up to the birth. Sekali was comfortable sitting in our scale pen for weekly

weighing. However, we wanted the scale associated with a high value so she would be comfortable stationing in the scale pen with doors closed, in case of medical intervention like dystocia or complications during parturition. This would prevent her from climbing and injuring herself after she had received anesthesia medication. Several other AZA facilities have incorporated a baby box into their holding spaces to allow orangutans to pass their baby to keepers while in protected contact if circumstances arose where keeper assistance with the baby was warranted. Lastly, abdominal ultrasound and stethoscope training was performed utilizing our veterinary technicians to ensure Sekali was progressing with a healthy pregnancy.



The orangutans had previously learned a retrieval behavior, where they would recover an item that the keepers aimed a laser pointer at and return it to the keepers. An orange plastic cylinder that represented the baby was placed in a pen. The orangutan would be shifted and asked to retrieve and bring it up to the mesh. The verbal cue 'Get the baby' was added to this retrieval behavior with the laser pointer being phased out as a prompt. This provided a behavior that would allow the keepers to visually examine the baby at the mesh. When the orangutan brought the 'baby' to the mesh, the keeper would touch the 'baby' with their finger and reinforce Sekali. The next approximation was for Sekali to touch, or target, the 'baby' to our finger and we would reinforce. We then moved our finger to different spots on the mesh and she targeted the 'baby' to our finger. Once this behavior was solidified, we transferred the finger target to the nipple of a baby bottle. Next was to work on the duration of holding the 'baby' to the bottle. From this, we attempted to mimic an actual bottle-feeding session by mixing an easy-blend flour with water to resemble baby formula. When each session was complete, the orangutan passed the 'baby' back through the hopper to us. At this point, we started to incorporate the baby box into the training session. Once each training session was over, we asked her to put the 'baby' in the baby box by holding the bottle at the mesh, resulting in her putting the 'baby' inside the box to target the 'baby' to the bottle. When the orangutan let go of the 'baby', the door was closed, the orangutan was reinforced, and



the 'baby' was removed from the baby box by keepers. The cue 'In the box' was added for this behavior and the bottle target was faded.

The day after Sekali gave birth to her son, keepers did a training session with her, starting with her regular maintenance behaviors. Then she was asked to target the baby to the bottle held to the mesh and she did! She was targeting the top of his head to the nipple but it was a great start. To further refine this behavior, keepers used a long pipette and reached it through the mesh and attempted to touch it to the mouth of the infant. When keepers were able to do this, Sekali was reinforced. The behavior progressed by changing the criteria to Sekali targeting the baby's mouth to the pipette. Once established, we switched back to the baby bottle and she transitioned to this new target smoothly. Since there was no imminent concern that we were going to need to bottle feed the infant, keepers decided to prioritize a dropper as the target so we could administer baby vitamin D drops.

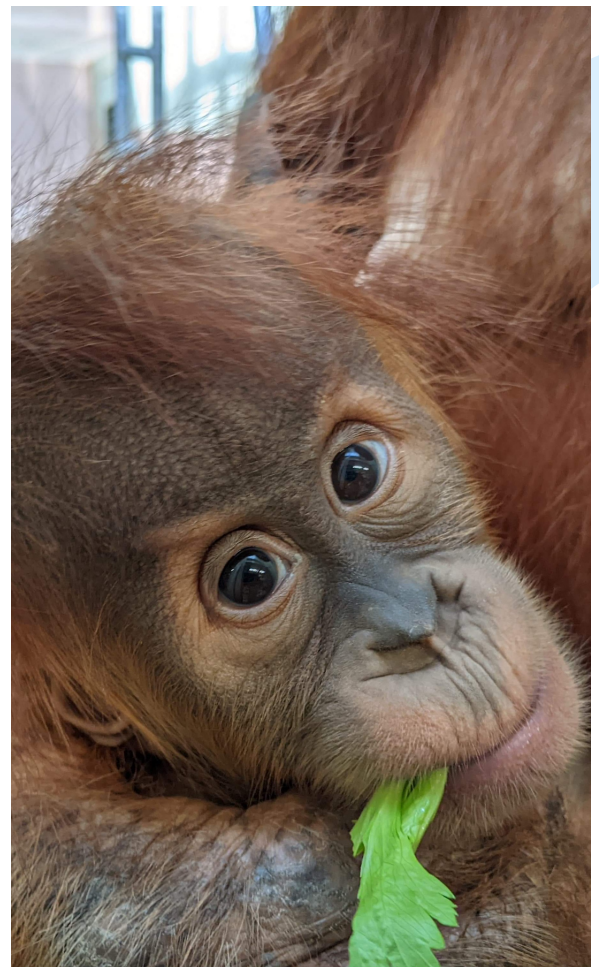
Preparing for this baby was a huge team effort not only within our zoo, but by consulting with keepers from other zoos. It allowed us not to reinvent the wheel. Our Baby Box was built in-house by our maintenance department based on a design from Cameron Park Zoo. Ultrasound training took place using a Heart Box, a design based from the Toledo Zoo. The Heart Box is a port with an insert, consisting of a metal box that has mesh on the front side and solid sides to protect the probe from being grabbed by the orangutan. Originally designed to ultrasound the heart, ours was customizable for the height of the box, size of the orangutan, and the location whether chest or abdomen. The Heart Box is where our vet technician also attempted to use a pediatric stethoscope to listen to the baby, but we were unsuccessful in detecting it.

This whole process exemplified how previously trained behaviors can be built upon to accomplish new behaviors! As Sekali's parturition date neared, she was separated from Budi. This was a precaution as it was Budi's first offspring, and in consideration of him being a young 15-year-old

male. Sekali was allowed to choose to spend her days in holding or in the indoor habitat, viewable by the public. We set up cameras in our holding area to monitor Sekali 24 hours a day. We monitored her disposition, behaviors, and eating habits, while watching closely for signs of labor. It was observed that she was restless on exhibit on April 7, 2022, so she was given access to the holding and chose to shift into it for the night. Sekali gave birth naturally inside the holding on April 8, 2022 without medical intervention. Active labor started at 11:32am and she gave birth to a baby boy at 3:06pm. She was observed nurturing and nursing her newborn. She continues to be an excellent mother to her baby named Wali. Wali means “guardian” in Indonesian, and fits nicely with the theme of our new outdoor orangutan habitat – Guardians of the Rainforest – that is scheduled to open in spring of 2023.

At the time of writing this article, we continue Baby Box training with Sekali and her baby. Sekali is getting more comfortable moving her baby into the Baby Box and will have him hover inside the box on her hand. We are hopeful Sekali will achieve this goal in the near future so our staff can perform physical examinations, regular weight checks, and administer vaccines. Currently we are weighing Sekali with her baby together in our scale pen, but through Baby Box training we hope to be able to weigh Sekali and Wali separately.

Sekali and Wali represent the vital role zoos have in saving critically endangered species like the Sumatran orangutan. By participating in the Species Survival Program, that matches orangutans based on their genetic compatibility and logistical concerns, the Toronto Zoo is ensuring the future of a healthy population in our care. In future plans, we look forward to introducing Sekali and Wali to Wali’s father Budi. From there, they will be introduced to their new outdoor habitat where together, they will inspire our visitors to become guardians of the rainforests themselves.



The ABMA Behavior Month

OCTOBER 2022

A whole month of behavior from

San Diego Zoo Wildlife Alliance
Columbus Zoo & Aquarium Toronto
Zoo Aquarium of the Pacific Nashville
Zoo Turtle Bay Exploration Park Bridge
Homeless Recovery Centre Niagra
Aquarium Blackland Prairie Raptor
Centre DDFL The Mirage Annette
Pedersen & Copenhagen Zoo Wild
Enrichment North Carolina Zoo Team
Building with Bite Seaworld Ushaka San
Antonio Zoo
Good Dog & Co.
Roosevelt Park Zoo
Lincoln Park Zoo
Window to the Wild
Boston Museum of Science
Dr Rise Van Fleet
Animals Asia
Cincinnati Zoo
Ben Hart The Donkey
Sanctuary
Zoo Miami
Jim Mackie & ZSL
Jerusalem Zoo
Hose 2 Habitat
Wild Welfare
and more....

Amazing Behavior Month offers during October for members from

Animal Training Fundamentals
San Diego Zoo Wildlife Alliance
NEI TEC Live workshop with MIAZS**
Members only viewing of Q & A recordings with
Featured speakers*

Additional membership benefits to be released soon

Featured Speakers & Presentations

Gary Wilson*

Barbara Heidenreich*

MIAZS (Minorities in Aquarium and Zoo Science)**

**\$5 off all NEW members
in October**

Use the code *Behavior Month* *

**valid for October only*



**Join now to
maximise your
benefits!**



Receive a **FREE** clicker from mytrainingstore.com
with every purchase of ABMA merchandise

The ABMA Behavior Month

October 2022 Benefits*

\$5 off
membership
in October*

1

15% discount off the virtual education program at Animal Training Fundamentals



2

A months access to select "My Academy" courses from San Diego Zoo Wildlife Alliance



3

Access to the entire NEI TEC Talk library during October



4

Members-only live workshop on "Ally Skills" with MIAZS



5

Reciprocal access to IMATA and ABMA's membership websites and resources



6

Members-only viewing of Q&A recordings with Featured Speakers

7

Receive a FREE clicker from mytrainingstore.com with every purchase



*Login to the ABMA members portal for all details to benefits and discounts

*Use the code **Behavior Month**

www.theabma.org

The ABMA Behavior Month

OCTOBER 2022

**\$5 off
membership
in October***

Free content every day on our Facebook page*

**Let's get
this month
started**

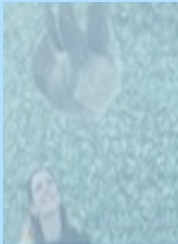









**Co
operative
care week**

**The Human-
Animal
Connection
Week**

**The
Evolution of
Enrichment
Week**

**Welfare
Around the
World Week**

**That's a
Wrap**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1 Featured Speaker Gary Wilson "The History of Animal Training"***	2 Featured Speaker Barbara Heidenreich "Advances in animal training that are improving welfare"***
3 Columbus Zoo Sea lion cooperative care	4 Aquarium of the Pacific Training Rays San Antonio Zoo Pelican and bird training	5 Toronto Zoo Orangutans maternal cooperative care Lincoln Park Zoo Pygmy slow loris training	6 Nashville Zoo Stingray station training Boston Museum of Science Chameleon and beetle training	7 ZSL Cooperative care around the zoo	8 Turtle Bay Exploration Park Barred owl voluntary vaccine injection Cincinnati Zoo Fritz the hippo	9 Turtle Bay Exploration Park Barred owl voluntary vaccine injection Cincinnati Zoo Fritz the hippo
10 North Carolina Zoo Working with Chimpanzees and Gorillas	11 MIAZS Members-only workshop on "Ally Skills with MIAZS"*** • LIVE ON ZOOM	12 Roosevelt Park Zoo Victor the Tiger Zoo Miami Ziggy the Giant Anteater	13 Lincoln Park Zoo Dwarf Caiman crocodile training Copenhagen Zoo Training animals to participate in educational sessions	14 San Diego Wildlife Alliance Animal Ambassadors connection with guests	15 Window to the Wild The Human-Animal Connection within the trainer-for-a-day program	16 The Bridge Homeless Recovery Centre Keeping dogs with their families Rise Van Fleet Animal-assisted therapy
17 Niagra Aquarium Sea lion enrichment Hose to habitat Barrel fire hose with belugas	18 Lincoln Park Zoo Lion enrichment Jim Mackie Enrichment in India	19 Animals Asia Seasonal Enrichment with bears Roosevelt Park Zoo Bobcat enrichment	20 Enrichment ideas from: Roosevelt Park Zoo (snake) Boston Museum of Science (jungle nymph) Hose to Habitat (use of vertical space)	21 Team-building with Bite-full walkthrough of an enclosure build Turtle Bay Exploration Park Raccoon and Raven enrichment	22 Jerusalem Zoo Carnivore enrichment ideas Kyle Banton-Jones "Behavioral Husbandry is a team sport"	23 Enrichment ideas from: Train with Trust - Mustangs DDFL - Cats and Dogs Hose to Habitat - Mandrills foraging devices Miami Zoo - elephants
24 Gabby Harris Sea World Ushaka "Noticing the function No to ensure well being of animals"	25 Cincinnati Zoo Trainer Takeover	26 Animals Asia Physiotherapy for bears Roosevelt Park Zoo Training a lion to take fluids	27 Copenhagen Zoo Training elephant calves for EEHV monitoring Turtle Bay Exploration Park Red fox voluntary toothbrushing	28 Wild Welfare "A Behavioral Management Approach to Improving Animal Welfare Globally"	29 Blackland Prairie Raptor Centre "The transition from traditional raptor handling to a training process built on positive relationships"	30 Copenhagen Zoo Training recalls in a mixed species aviary Ben Hard The Donkey Sanctuary UK
31 North Carolina Zoo Teamwork and training to prepare a Rhino for a dental procedure	The ABMA Behavior Month Wrap-up					

Featured Speakers & Presentations

Saturday, 1st of October

Gary Wilson

"The History of Animal Training"

*** Post questions in the facebook comments of the post and Gary and Barbara will answer them in a video for ABMA members.*

*** Use the code "Behavior Month" for \$5 off ABMA membership*

Sunday, 2nd of October

Barbara Heidenreich

"Advances in animal training that are improving welfare"

Note - Featured speakers presentations will be uploaded to Facebook at 12 PM Pacific Time.

Members-only Offers

ABMA members can find the links and logins to members-only events and offers on the members site of the ABMA website.

Members-only Workshop

Monday, 11th of October

5:30pm Pacific Time

"Ally Skills Workshop"

Hosted by MIASZ - Minorities in Aquarium and Zoo Science for ABMA members

Registration and login details on members page of website.

- * 15% discount off the virtual education program at Animal Training Fundamentals
- * A month's access to select "My Academy" courses from San Diego Wildlife Alliance
- * Access to the entire NEI TEC Talk library during October
- * Reciprocal access to IMATA and ABMA's membership websites and resources for all of October
- * FREE clicker from mytrainingstore.com with every purchase of ABMA merchandise during October



Links and logins to members only content will be posted to the members page of the ABMA website

**Daily content subject to change*



Taking Training Techniques to Tortoises

Shea Leffler, Louisville Zoo

It's not unusual for many animal care professionals, during the course of their career, to have a pivot – a change of pace or even a change of focus. But sometimes, these “pivotal” moments allow for clarity and insights about the new animals under their care. Such was the case when Keeper Shea Mikel transitioned from the Louisville Zoo's Gorilla Forest area to the HerpAquarium in 2017.

Previously, Shea had been caring for and training gorillas. Moving to an area with a primarily reptile focus was a significant change. After two years in her new role, the lead Aldabra tortoise keeper retired. Shea inherited the role as lead keeper. As such, she began to consider the many facets of the tortoises' care.

At the time she moved into the position, the tortoises were only weighed once per year, and at times it took six individuals to perform the action, which involved lifting the tortoise and moving them to the scale. Reflecting on her years with animals, Shea began to wonder if perhaps the tortoises could be trained to make this exercise less complicated, more frequent, and more positive for the tortoises.

Shea began to concoct an idea on how to train the large reptiles to make their own way onto the scale, which consists of a large board with indents for four “foot sensors”, allowing the scale to fit underneath. The first hurdle was to get the tortoises accustomed to the board. Her idea was to place food onto the board, incentivizing the tortoises to climb onto the board to enjoy their meal. Then, once they were comfortable with climbing onto the scale-less board, the sensors could be added underneath.



But how do you get a tortoise to follow food to a board? Shea decided to start with target training. She put a bright green tennis ball on a dowel rod. The color and softness would be beneficial to capturing the tortoises’ attention. Then, she would touch the nose of the tortoise with the ball and drop the food in front of them. After the tortoises were accustomed to this, she began to hold the ball in front of the tortoise and wait for them to touch it with their nose instead. Each time the tortoise touched the ball, Shea would hold out delicious leafy greens and let them take a bite. Then, she would pull the treat back and hold out the stick again for the animal to touch the ball again. Over time, this distance to touch the ball became longer

and longer. First, the animal might stretch their neck to touch the ball. Then, they may walk a few steps. Soon, it was a significant distance. If they walked two steps or performed a wanted behavior, Shea would reinforce with lots of leafy greens.

After this long, patient process, the tortoises understood they needed to walk to the ball, and the board, for their leafy reinforcement. A 6-person process that required lifting a tortoise and didn’t allow choice, suddenly only required two people: one person to train the tortoise that was getting weighed and one person to monitor the other tortoises so that it didn't come to the target or bother the tortoise that she was currently training.

What a gratifying end to her training idea! Now that the one process of weighing was easier, the team began to wonder “what else could we do for the tortoises?” They checked in with the Animal

Health Team and the response was “we need an easier process to draw blood from the tortoises’ necks.”

A tricky request! First, the keepers would need to get the tortoises to stick their neck out. This was accomplished in a couple of ways based on the individual; it could be done by offering food or by touch. Once they discovered the best method for each tortoise, they begin working to acclimate each individual to blood drawing. At first, they simply touched the neck with a capped needle to desensitize the tortoise. Then, after some time, they took the cap off to do hard pokes. It was discovered that going in at a 90-degree angle to draw blood was a better method, as it prevented the vein from moving as much. Sometimes eating could make the tortoise’s neck move too much, so the staff would provide their food first and then rub to get the animal to extend their neck. The Zoo’s oldest tortoise, Dot, preferred only one person around for blood draws. One vet staff member would both rub her neck and draw the blood. It’s important to know each individual’s preference and personality for training to be the most effective!



Some of the tortoises were more tolerant than others, but every time they stayed still for a period, the tortoise would receive reinforcement, even if the team didn’t get blood or if the tortoise eventually walked away. Now, the veterinary team has an easier time drawing blood and the tortoises play an active role in their preventative care!

Another challenge with the very large Aldabra tortoises was that they often enjoyed lounging in areas where it wasn’t easy to get access to them. When they chose to relax in the zoo’s Island streams, staff would often have to wait for them to leave before they could perform needed tasks. This could sometimes take days! Shea, once again reflecting on her time in Gorilla Forest with patas monkeys, wondered if the tortoises could undergo station training — where the animal is asked to sit or stand still at a designated area. The patas monkeys had figured out where to go based on the shape of the item keepers presented, but perhaps the tortoises could be trained through color.



The team decided to try. Shea painted regular traffic cones red, blue, white, yellow and kept one unpainted in orange. Traffic cones were ideal items because they are big, tall, and can't be crushed. Shea started by putting a cone next to the tortoise with some greens near it. Once the tortoise had eaten the greens, the cone was removed. Each time, the same color cone was placed next to the same tortoise. This process continued for some time. Eventually, she began increasing the distance from the tortoise each time. If the tortoise went to the correctly colored cone, they would receive greens. Sometimes, Shea would tap on the cone with a training stick to draw their attention. Eventually, the tortoises began coming out of the water, mud, and other areas to walk to their cone!

The tortoises are still learning this behavior as they sometimes go to an already placed bowl. When that happens, Shea removes the cone from the bowl. By doing this, she hopes to prevent the tortoises from associating the wrong colored cone with their own. But, currently, most of the time the tortoises come to the right cone, even when given the option of two cones. Eventually, the care team hopes the tortoises will stay at the cone until the food in the bowl is gone. With more fine tuning, it appears the tortoises will be fully station trained in the near future. What an exciting development!

When asking Shea about one of the challenges in helping people train tortoises, she said, "You have to give tortoises lots of time to respond. They aren't like other animals; they may want to work but they have to build up to a response. There were many times I sat there until I almost dozed off. Patience is key!"

We can't wait to see what amazing new training ideas Shea and the Aldabra tortoises will accomplish next!



IMATA-ABMA
2023 CONFERENCE
ATLANTA

Sea Lions, Tigers, and Training... Oh My! A Look Ahead to the 2023 Annual Conference

Shane Gorbett, ABMA Conference Co-Chair

The ABMA wants you to join us at the 2023 Annual Conference in Atlanta, Georgia from March 5th-10th!

After two years of virtual conferences we are so excited to see everyone back in-person in Atlanta! Not only will this be the first in-person conference in two years, this will be the first ever joint conference with IMATA, International Marine Animal Trainers' Association. There was no better way to celebrate 20 years of ABMA and 50 years of IMATA than by joining together for an unforgettable conference.

Celebrating these milestones, we are looking back to the History of Training: where we started, where we are now, and where we are going. Get ready for a week of presentations from experts and colleagues from around the world, visits to Zoo Atlanta and Georgia Aquarium with behind the scenes experiences, and connections that will last a lifetime. The animal care field is ever-changing and the 2023 Annual Conference hopes to continue to further the fields of behavior management, research, welfare, enrichment, leadership, and so much more! Get ready to join in the discussions and as we all collaborate, explore and share ideas about the animal care field and behavior management.

Looking to present at the 2023 ABMA/IMATA Annual Conference? Abstracts for formal presentations and posters are due October 31st, 2022. For more information on how to submit an abstract and register for the conference visit the conference website:

[Click here to register](https://www.imata.org/conference_sites/atlanta2023/index.html)

Or visit - https://www.imata.org/conference_sites/atlanta2023/index.html



Capybara Counterconditioning in a Time Crunch: Creating Quality Connections with 0.2 *Hydrochoerus hydrochaeris*

Micaela Jacobs, Fresno Chaffee Zoo

Fresno Chaffee Zoo (FCZ) animal care staff successfully implemented counterconditioning protocol in a highly constrained daily time period with 0.2 capybara. Upon arrival and for their first two years at FCZ, both capybaras maintained a large flight distance from staff and would not eat when staff were present.

Due to previous incidents of intraspecific aggression, the capybaras could only be offered food reinforcers during a forty-five-minute time block each afternoon when they were separated from each other in a small indoor holding space. During this time, staff needed to complete other end of day closing duties. At the beginning of the protocol, any approach would cause them to rapidly retreat to the back wall of the holding space.

We began by implementing a protocol where a trainer would drop one third of their diet into a bowl near the front of each capybara's holding space three times, instead of providing the food all at once. The trainer would then immediately walk away. This allowed us to care for other animals in

the section. Due to the lack of flight distance and small number of reinforcement opportunities we did not have high hopes for success.

Surprising us all, it took less than one month for the capybaras to begin accepting food directly from the hands of certain trainers. This allowed us to build a quality connection through daily positive reinforcement training sessions. Each capybara rapidly progressed to touching a target pole with her nose and climbing voluntarily onto a scale.

To go back in time to December of 2017, five-month-old female capybaras Twix and Tootsie arrived at the Fresno Chaffee Zoo (FCZ) in Fresno, California from the Greater Vancouver Zoo in Aldergrove, British Columbia. In congruence with the Fresno Chaffee Zoo's mission of excellent animal welfare, we sought to build a positive human-animal relationship (HAR) to reduce stress during routine care and allow positive reinforcement training of select medical husbandry behaviors.



Upon arrival, the capybaras would maintain a large flight distance from staff when possible and would not eat when staff were present. Unfortunately, this fearful behavior continued even as the capybaras settled into their new home. This meant that, unlike the other animals in the section, we were unable to provide the capybaras with positive reinforcement training sessions.

In January of 2018, FCZ staff implemented a desensitization protocol in an attempt to improve Twix and Tootsie's HAR. In this protocol, a trainer would sit for one consecutive hour holding out a long piece of leafy browse. This protocol was time consuming and ineffective. It was abandoned after six months with no progress.

In January of 2019, Twix and Tootsie were separated after an overnight incidence of intraspecific aggression. After a lengthy reintroduction process, the capybaras were successfully reunited. However, in order to avoid potential resource guarding, we began to separate them from each other for a 45-minute period each afternoon while they consumed their afternoon diet.

At the end of 2019, we came up with a plan that would allow us to build a positive human-animal relationship (HAR) within the unusual confines of their situation – a small holding space and very brief time period, during which staff members needed to perform other end of day closing duties.

At 3:40 p.m. each day, a trainer would open the shift door between the capybara exhibit and a small indoor holding space. Unfortunately, Twix and Tootsie at this time were not trained to shift in from their exhibit voluntarily. In order to bring them inside the trainer would walk onto exhibit and gently “herd” both capybaras into holding. Because Twix and Tootsie maintained a large flight distance from humans whenever possible, the trainer could easily move them by slowly walking toward the shift door.

Once inside, the capybaras would habitually separate into one of two rooms within their holding space. The trainer would then close the shift doors to separate them. Each room measured 9.5 feet by 6.5 feet and contained a food bowl as well as a bowl of drinking water, a water tub, and a dry tub for a bed. The food bowl was placed near the front mesh of the enclosure, where a trainer could easily drop food items inside.

Capybara Hand Feeding Plan

3:45	Separate capybaras. Each animal should have an empty bowl in their room. Drop their vegetables and chow in their bowls. Walk away.
4:00	Drop half of their lettuce in their bowls. Walk away.
4:15	Drop the other half of their lettuce in their bowls. Walk away.
4:30	Pull out all remaining food. Put capybaras back together. Give access to the outside if it’s warm enough. Finish closing as normal.

Figure 1. Counterconditioning protocol implemented 11-14-2019.

The trainer would approach the mesh, drop part of Twix or Tootsie’s diet into her food bowl, and then walk away. This was repeated three times. In the time between feeds the trainer would care for

other animals in the section. Once Twix and Tootsie had enough time to finish their food, the trainer would remove their food bowls and give the capybaras access to each other.

When we first implemented the counterconditioning protocol, Twix and Tootsie would rapidly retreat to the back wall of their holding space as their trainer entered the building. However, they quickly progressed. In just a few days they began to wait at the bowl rather than move away at our approach. In less than one month, both capybaras were choosing to eat from our hands as we pushed the food through the mesh rather than wait for it to fall into the bowl.

Once we were able to directly provide food reinforcers to the capybaras, we began shaping for specific behaviors via differential reinforcement. Twix and Tootsie each rapidly mastered a protected contact “target” behavior – touching their muzzle to a rubber ball at the end of a stick held through the mesh at the front of their holding space. A trainer would then move the target during a session to lead them onto a stainless steel postal scale for a voluntary weight measurement.

Timeline

07-24-2017	Twix and Tootsie were born at the Greater Vancouver Zoo
12-05-2017	Twix and Tootsie arrived at the Fresno Chaffee Zoo
11-14-2019	Counterconditioning-based hand feeding protocol began
12-04-2019	Twix and Tootsie began hand feeding from certain trainers
12-28-2019	Trainers began shaping target and scale
01-01-2020	First voluntary weight measurement

Figure 2. Timeline of events related to capybara HAR

Twix and Tootsie are now confident, consistent participants in daily husbandry training sessions. Their flight distance has decreased both on exhibit and in holding, allowing us to perform routine animal care tasks without unnecessary stress. They are currently practicing a hand feeding behavior on exhibit that will facilitate veterinary examinations and may someday become part of a behind-the-scenes tour for select zoo guests.

A positive human-animal relationship (HAR) has been found to produce measurable benefits for animals housed in zoological facilities. In fact, two separate studies published in *Applied Animal Behaviour Science* revealed impressive results – both using a model that measures the HAR of various animals and using that to successfully predict increased enclosure use in activity budgets and reduced fear behaviors toward humans (Claxton, 2011) (Melfi & Ward, 2013). The use of strategic counter-conditioning to establish a positive HAR with animals that currently display fear, aggression, or avoidance behaviors toward humans may allow a drastic improvement of the quality of life for many animals housed in human care.

In addition to improving animal welfare, a positive HAR can allow us to be even better at achieving our goals of educating and inspiring guests. A 2003 study published in *Environment and Behavior* found that “public animal training and public animal training with interpretation produce more positive zoo experiences, training perceptions, exhibit size and staff assessments, and longer visitor exhibit stay times when compared to passive exhibit viewing and interpretation-only sessions” (Anderson, Kelling, Pressley-Keough, Bloomsith, & Maple). The benefits of public training sessions paired with interpretation may become available for more animals than ever before if positive human-animal relationships can be developed easily by counter-conditioning a previously aversive association with humans.

In Twix and Tootsie’s care, simply dividing one meal into three allowed trainers to rapidly counter-condition a previously aversive stimulus (the presence of humans) by pairing it repeatedly with a reinforcer (food items). In just three weeks, this simple protocol provided a transformative opportunity to permanently shape their relationship with animal care staff. This was accomplished despite daily aversive interactions in the form of herding, a small holding space with minimal opportunity for flight, and a highly constrained daily time period where food could be offered. Their impressive behavior changes may be relevant for other zoo animals who cannot currently be trained or handled by staff in ways that are ideal for their welfare due to a negative HAR, especially in cases where staff are significantly limited in time and resources.



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