

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

AKT

Animal Keepers' Forum



February 2021, Volume 48, No.2

feed me



**Value
Quality
Convenience**

Discover what tens of thousands of customers including commercial reptile breeding facilities, veterinarians and some of our country's most respected zoos and aquariums have already learned: with Rodentpro.com®, you get quality AND value! Guaranteed.

RodentPro.com® offers only the highest quality frozen mice, rats, rabbits, guinea pigs, hamsters, gerbils, chickens, quail, live insects, other foods and supplies at prices that are MORE than competitive. We set the industry standards by offering unsurpassed quality, breeder direct pricing and year-round availability.

We are confident that you will be truly pleased with the products and service you receive from RodentPro.com®. We will do whatever it takes to earn your business. ***We guarantee it!***

Order online!
www.RodentPro.com
It's quick, convenient
and guaranteed!

P.O. Box 118
Inglefield, IN 47618-9998

Tel: 812.867.7598

Fax: 812.867.6058

E-mail: info@rodentpro.com





- 33 ABOUT THE COVER**
- 34 FROM THE PRESIDENT**
- 35 CALL FOR PAPERS**
AAZK NATIONAL CONFERENCE

FEATURED ARTICLES

- 38-41**
Creating a Browse Program
During the COVID-19 Era
Rob Maganja
- 42-44**
Zoo Conservation and Cultural
Divides: Understanding our past
and looking to the future
Karen Ross

- KEEPER CHAT**
45-46
Ruminations: A chat about AAZK's evolving
professional development program
with Bethany Bingham

TRAINING TALES

- 47-50**
You CAN Teach an Old Camel New Tricks:
Navigating the challenges of wound treatment
in a protected contact setting
Britni Steingard

MY AAZK

- 51-54**
Connecting Careers to Colleges: Hosting a career
exploration event for college students
Kathryn Juliano and Hilary Colton



FIRST RESPONSE CART[®]



Golf cart, completely customized by A Thru Z, including design, fabrication, and installation.

Innovative, multi-functional, emergency response vehicle for Reid Park Zoo. Secure, animal/keeper transport.



8620 E. Old Vail Rd., Ste. 100 Tucson, AZ 85747

Ph: 520.434.8281 | Fax: 520.434.0151

Email: info@athruz.net | Website: <http://www.athruzcad.com>





MISSION STATEMENT

American Association of Zoo Keepers, Inc.

The American Association of Zoo Keepers, Inc. exists to advance excellence in the animal keeping profession, foster effective communication beneficial to animal care, support deserving conservation projects, and promote the preservation of our natural resources and animal life.

ABOUT THE COVER

This month's cover photo comes to us from Molly Foster of Hutchinson Zoo. The photo features "Conky", a male Cuvier's dwarf caiman (*Paleosuchus palpebrosus*) at the Hutchinson Zoo. One of the smallest crocodylians in the world, dwarf caiman males can get up to 1.5 meters in length, with females reaching a smaller 1.2 meters. Like many of their larger cousins, they are nocturnal ambush predators, hiding perfectly still, just under the water with only their eyes and nostrils exposed as they wait for fish or small mammals to pass by. Conky and his female companion spend much of the daylight hours basking, thermoregulating by opening their mouths in a "crocodile grin."

Dwarf Caiman are able to tolerate much cooler temperatures than most of their kin. Like most crocodylians, they communicate with others of their kind often, using sound and body signals. They are most often found living singly or in pairs. Dwarf Caiman are considered a keystone species. Without their presence, populations of fish like piranha would quickly explode, consuming all available resources and decimating the ecosystem.

Articles sent to *Animal Keepers' Forum* will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the Editor. The Editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or e-mail contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone (330) 483-1104; FAX (330) 483-1444; e-mail is shane.good@aazk.org. If you have questions about submission guidelines, please contact the Editor. Submission guidelines are also found at: aazk.org/akf-submission-guidelines/.

Deadline for each regular issue is the 3rd of the preceding month. Dedicated issues may have separate deadline dates and will be noted by the Editor.

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

Items in this publication may be reprinted providing credit to this publication is given and a copy of the reprinted material is forwarded to the Editor. If an article is shown to be separately copyrighted by the author(s), then permission must be sought from the author(s). Reprints of material appearing in this journal may be ordered from the Editor. Regular back issues are available for \$6.00 each. Special issues may cost more.

MEMBERSHIP SERVICES

Animal Data Transfer Forms available for download at aazk.org. AAZK Publications/Logo Products/Apparel available at AAZK Administrative Office or at aazk.org.



ANIMAL KEEPERS' FORUM

TO CONTACT THE AKF EDITOR:

Shane Good, AKF Editor

P.O. Box 535, Valley City, OH 44280

330-483-1104

Shane.Good@aazk.org

AAZK Administrative Office

American Association of Zoo Keepers

8476 E. Speedway Blvd. Suite 204

Tucson, AZ 85710-1728

520-298-9688 (Phone/Fax)

CHIEF EXECUTIVE/FINANCIAL OFFICER:

Ed Hansen | Ed.Hansen@aazk.org

DIRECTOR of PROFESSIONAL DEVELOPMENT and CONFERENCE MANAGEMENT

Bethany Bingham, Bethany.Bingham@aazk.org

ANIMAL KEEPERS' FORUM - EDITOR

Shane Good, Shane.Good@aazk.org

GRAPHIC DESIGNER

Elizabeth Thibodeaux, Elizabeth.Thibodeaux@aazk.org

ENRICHMENT OPTIONS COLUMN COORDINATORS

Stephanie Miner

Beth Stark-Posta, Beth Ament-Briggs

TRAINING TALES COLUMN COORDINATORS

Kim Kezer, Jay Pratte, Angela Binney

CONSERVATION STATION COLUMN COORDINATOR

Wendy Lenhart

ANIMAL WELFARE COLUMN COORDINATORS

Stephanie Miner

Beth Stark-Posta, Beth Ament-Briggs

BOARD OF DIRECTORS AND OVERSIGHTS

PRESIDENT: Paul Brandenburger, Paul.Brandenburger@aazk.org

VICE PRESIDENT - Conservation: Nicole Pepo, Nicole.Pepo@aazk.org

Ethics Chair

Conservation Committee

Chair: Saul Bauer, Conservation@aazk.org

Vice Chair: Carrie Ellis, Conservation@aazk.org

Bowling for Rhinos Program

Program Manager: Kym Janke, Kym.Janke@aazk.org

Vice Manager: Matthew Mills, BFR@aazk.org

Trees for You and Me Program

Program Manager: Christy Mazrimas-Ott, Christy.Mazrimas-Ott@aazk.org

Vice Manager: Vacant

BOARD MEMBER - Education: Ellen Vossekul, Ellen.Gallagher@aazk.org

International Outreach Committee

Chair: Yvette Kemp, Yvette.Kemp@aazk.org

Vice Chair: Noah Shields, IOC@aazk.org

AAZK Resource Committee

Chair: Jenny Owens, ARC@aazk.org

Vice Chair - Loren Berry, ARC@aazk.org

BOARD MEMBER - Recognition: James Weinpress, James.Weinpress@aazk.org

Awards Committee

Chair: Erika Defer, Awards@aazk.org

Vice Chair: Autumn Lindey, Awards@aazk.org

Grants Committee

Chair: Laura Chapman, Grants@aazk.org

Vice Chair: Stacie Bockheim, Grants@aazk.org

BOARD MEMBER - Regulation: Kristen Scaglione, Kristen.Scaglione@aazk.org

Safety Committee

Chair: Sara Morris, Sara.Morris@aazk.org

Vice Chair: Kathryn Juliano, Safety@aazk.org

Animal Welfare Committee

Chair: Megan Wright, Megan.Wright@aazk.org

Vice Chair: Tricia Gunther, BHC@aazk.org

Bylaws Program

Rebecca Filippini, Rebecca.Filippini@aazk.org

BOARD MEMBER - Communication: Abbie Doan, Abbie.Doan@aazk.org

Communication Committee

Chair: Joy Kotheimer, Communication@aazk.org

Vice Chair: Tianna Redieck, Communication@aazk.org

National Zoo Keeper Week Program

Program Manager: Jenna Schmidt, NZKW@aazk.org

Vice Manager - Audrey Harmon, NZKW@aazk.org



AAZK.org is home to many great resources that can be accessed by signing in to the members' section.

Online and distance learning has become essential for education and development in the past year. As a membership association fostering effective communication in the animal care profession, AAZK seeks to provide new and exciting resources that keepers can use to connect and advance in the absence of our annual conference. The members' section of the AAZK website houses and links members to these resources.

Many of the best individual resources are found under the Member Resources tab. First under the Member Resources tab is the AAZK Online page. Access to AAZK Online is available to all individual membership levels. This resource currently offers a catalog of courses related to the animal care profession and will see a significant rebrand and recommitment starting in 2021 with potential for great growth moving forward. The AAZK Member Resources page now holds Professional Resources such as example resumes, cover letters, and interview questions that members can use to gain or improve employment in the field. The tab also connects members to AAZK Conference Resources for every AAZK Annual Conference from 2012 to present day.

Individual resources are not the only ones found on the website as Chapter support documents are also housed under the Member Resources tab. There are four important pages found on the website: Chapter List, Chapter Formation, Chapter Operation, and Chapter Re-Charter Instructions. If hoping to connect with other nearby Chapters, the Chapter List can search for all Chapters in a state. The Chapter Formation and Chapter Operation pages contain informative documents on forming a local Chapter as well as improving leadership, communication, recruitment, and fundraising for pre-existing Chapters. Finally, as any Chapter leader knows, the re-charter process can be complicated, so looking to the website for assistance can prove to be a helpful tool.

And don't forget to peruse the pages for AAZK's Committees & Programs for other relevant information. If your Chapter is looking to start or improve local efforts for Bowling for Rhinos, Trees for You and Me, or National Zoo Keeper Week, then check out the pages for these AAZK Programs. Check out the Animal Welfare or Safety Committee pages for resources that can be used to improve health and safety at your job. Looking to recognize yourself or your co-workers great work? Visit the Grants and Awards Committees pages. Please visit all of the Committees & Programs pages to learn about the great work going on within the Association.

AAZK.org is home to many great resources that can be accessed by signing in to the members' section. In an age of improved online education and resources accessibility, AAZK will work to improve year-round access to professional improvement opportunities as we build toward the return of the AAZK Annual Conference hosted by the Los Angeles Chapter in 2021!

Cheers,

Paul
Paul.Brandenburger@azk.org



FIRST CALL

PAPER & POSTER ABSTRACTS

2021 AAZK National Conference

46th Annual AAZK National Conference
Los Angeles, California, August 29 – September 2, 2021

Conference Theme: “Lights, Cameras...Take Action!” Call for Papers and Posters

The AAZK Professional Development Team is pleased to announce the call for papers and posters for the 2021 AAZK National Conference hosted by the Los Angeles AAZK Chapter. The deadline for submission of abstracts for Papers and Posters is **May 1, 2021**. Authors will be notified regarding acceptance by **June 1, 2021**.

HOW TO SUBMIT YOUR ABSTRACT FOR CONSIDERATION:

- **Submitting a Paper?** Follow this link to the Google Form
<https://bit.ly/2QeMgTu>
- **Submitting a Poster?** Follow this link to the Google Form
<https://bit.ly/3n1ZVKR>

You may also e-mail PDC@aazk.org for a direct link to the Google Form, or visit the conference website for more information at <https://www.aazk2021.org/> *If you do not use the Google Form application, your abstract will not be reviewed.

PAPERS

Authors will be allowed 15 minutes for a presentation with five minutes of Q & A immediately following. If accepted, you may be scheduled to present your paper in the main ballroom, or you may be scheduled to present your paper during a concurrent, themed paper session which may have a more intimate setting.

POSTERS

Posters will be on display throughout the Conference with a dedicated Author Session scheduled for the evening of August 31st. Prior to the Author Session, posters will be judged by members of the AAZK Professional Development Team on criteria such as adherence to the conference theme, innovation, and poster layout and organization. Certificates will be awarded to the top three highest scoring posters during the Conference Awards Ceremony immediately following the Poster Author Session.

ANY QUESTIONS SHOULD BE DIRECTED TO PDC@AAZK.ORG WITH
ATTN: PAPER OR POSTER AS PART OF THE E-MAIL SUBJECT.

CALL FOR NOMINATIONS 2021 AAZK AWARDS

The American Association of Zoo Keepers (AAZK) Awards Committee is accepting nominations for awards listed to the right, which will be presented at the 2021 AAZK Conference in Los Angeles, CA.

**THE DEADLINE FOR NOMINATIONS
IS MAY 1, 2021.**

Information concerning the qualifications, nomination procedure, selection procedure and an explanation of the awards may be obtained at www.aazk.org, under committees & programs/awards committee.

LIFETIME ACHIEVEMENT AWARD

MERITORIOUS ACHIEVEMENT AWARD

LUTZ RUHE PROFESSIONAL OF THE YEAR AWARD

JEAN M. HROMADKA EXCELLENCE IN ANIMAL CARE AWARD

EXCELLENCE IN ANIMAL NUTRITION AWARD

EXCELLENCE IN EXHIBIT RENOVATION AWARD

JANET MCCOY EXCELLENCE IN PUBLIC EDUCATION AWARD

NICO VAN STRIEN LEADERSHIP IN CONSERVATION AWARD

**LEE HOUTS ADVANCEMENT IN ENVIRONMENTAL
ENRICHMENT AWARD**



CALL FOR NOMINATIONS

AAZK

Board of Directors

The American Association of Zoo Keepers (AAZK) is seeking nominations for three (3) positions on the AAZK Board of Directors. Each candidate shall be nominated by a Professional peer within AAZK. Qualified candidates shall be active Professional Members in good standing with AAZK. AAZK Bylaws require that a Board Member have the title of Animal (Zoo) Keeper or similar and if in a supervisory role at their facility, maintain daily husbandry contact with the animal collection. AAZK reserves the right to contact the candidate's employer to verify candidate job duties conform to AAZK policy. The electronic voting period to elect Board Members to the Association will be open from **May 1, 2021 to June 1, 2021** on the AAZK website.

The Letter of Nomination shall include a brief synopsis of candidate work history, previous experience within AAZK and detail the number of years within the Profession.

Deadline for Nominations to the AAZK Board of Directors shall be postmarked or e-mailed prior to midnight FEBRUARY 28, 2021.

**NOMINATIONS CAN BE SENT TO
ED.HANSEN@AAZK.ORG OR MAILED TO:**

Ed Hansen, CEO/CFO
AAZK Inc.
8476 E. Speedway Blvd., Suite 204
Tucson, AZ 85710-1728



PREFERRED EXPERIENCE:

Experience as an officer in an AAZK Chapter, Committee Chair, or Conference Chair. Excellent organizational and time management skills, coupled with the ability to meet tight deadlines; problem solving and motivation of subordinates and quality public speaking skills.

REQUIREMENTS:

Each elected candidate shall be required to attend monthly electronic meetings of the AAZK Board of Directors, read and answer daily electronic communications, supervise the work of Committees and/or Program Managers and shall be required to attend the annual AAZK Conference. An elected candidate can expect to commit anywhere from 4-6 hours per week in the performance of AAZK Board duties.

NOMINATIONS:

A Letter of Nomination shall include:

- Name of Candidate
- Zoo Affiliation
- Zoo Position Title
- Contact Information (address) including a phone number
- E-mail address

Reminder – AAZK Professional Members AAZK BOARD OF DIRECTORS ELECTRONIC VOTING

Candidate profiles for election to the AAZK Board of Directors may be viewed at AAZK.org beginning **April 1, 2021**.

Professional Member electronic voting for candidates to the AAZK Board of Directors will open on the AAZK website (www.aazk.org) on **May 1, 2021** and will close at midnight **June 1, 2021**.



Creating a Browse Program during the COVID-19 Era

*Rob Maganja, Horticulturist
Akron Zoological Park
Akron, Ohio*

I've worked in The Akron Zoological Park's Horticulture Department for a year and a half now. And I've only had \$200 to purchase plants. Zoo horticulture is definitely struggling because of COVID-19. However, for now, I'll talk about how, in our isolated situation, we're adapting and innovating to make up for that lack of funds.

Over the course of 2020, our small team has employed a barrage of tactics to keep the zoo looking both spiffy and botanically-relevant. We've taken plants from the abandoned lots surrounding the zoo that the zoo owns. We've had donations of money and plants. We've started a lot of plants from seed. We're being more vigilant about bulb and tuber saving. We're taking full advantage of our on-site resources—through the utilization of compost from our composter "Big Hanna" (even though it's still way too alkaline for most of our plants), and through leaving as much of our botanical capital on-site as possible (in the forms of chopped up grasses and leaves).

Photos demonstrate the side of the Akron Zoological Park's Welcome Center that faces a parking lot and our compost building, which houses the composter "Big Hanna". When I started this position, that chunk of land was inundated with a number of invasive

BELOW: The side of the Welcome Center after all the Glossy Buckthorn and other invasives were cut back and treated with a selective herbicide.

RIGHT: The side of the Welcome Center after the densely-packed cluster of Black Hills Spruces was spaced more appropriately.

OPPOSITE PAGE: The side of the Welcome Center after magenta-flowered azaleas from Zoo Gardens were replanted here.



species, including the incredibly tenacious glossy buckthorn. I cut these back and started to remove them with a selective herbicide. I eventually spread apart a number of black hills spruces that were placed in a dense copse, so that they'd look more natural. Azaleas from our Zoo Gardens exhibit, which were planted way too close together and were sited in a much-too-sunny spot, were spaced throughout. Forsythias and rhododendrons from an abandoned lot were planted in this bed. Plentiful additions of compost from "Big Hanna" were added to nourish these plants.

In normal times, our plant budget is thousands of dollars. And we have six-or-so seasonal workers to help with all the horticultural tasks. But, even in these stripped-back times, the zoo still sees horticulture as a necessity. So much so that when our zoo closed to the public in spring and early summer due to COVID-19, guest services and several office staff members were routed to our department to help fill the void.

For most of the summer and fall, there were just the three of us horticulturalists, plus one full-time seasonal. Our workloads were amended accordingly due to the reduction in seasonal staff. However, you can only strip back so much when there are essential duties that need to be accomplished. Straight-

up horticulture at private estates, arboretums, and botanical gardens certainly still is important—people need a green oasis now more than ever. But, zoo horticulture is a whole different beast. We're constantly reminded that we are part of the network that's necessary to feed and stimulate the multitude of animals that the Akron Zoological Park is responsible for.

Thus enters the concept of browse, which is an interesting—and some might even say, controversial—point of discussion at the Zoo. In theory, browse is simple. Someone collects some sort of botanical object and gives it to an animal. The animal eats or plays with said botanical object and gets nutrition and/or cranial stimulation from it. So, theoretically, our keepers should be able to just go out and collect branches and grasses and leaves and flowers from the surrounding landscaping without problem, right? The issue is that the landscaping closest to an animal habitat is usually used for its aesthetic value. It either adds directly to the beauty of the space, or it provides screening, so that the public can't see something that would disrupt their viewing experience. To prune a branch that provides beauty or screening is a big no-no.

When budget constraints are lifted a bit, we hope the keepers can plant browse plants near animal habitats, to be used





Willow cuttings taken in early 2020 after approximately 6 months.



Two dozen willow seedlings planted in the detention basin at the back of Akron Zoo's B-Lot.

specifically for that purpose. Meaning these plants will be hacked-up and ugly—all for the benefit of the animals. But, in the meantime, the importance is finding specific areas of the property to place browse plants or just sustainably harvest already-mature specimens. Prior to COVID-19, we were planning to create a browse garden in a spot that would be centrally-located and wouldn't be touched by construction for at least 10+ years. However, because the zoo is constantly growing, it's hard to know where new projects will extend geographically, so it's near impossible to even site a browse garden.

The most sustainable way to go about a browse garden—to my knowledge—is to employ the concept of coppicing, where trees grow for years, until their root systems are well-developed, and then they're cut to the ground so that they can flush out multitudes of new branches once or twice a year.

So, if we can't initiate a coppice-centric browse garden, we'll work out a Plan B. To start with, we've got a list of invasive plants found readily throughout the zoo that provide very little horticultural benefit. Those could be hacked and leveled to the ground by the keepers, and we horticulturalists wouldn't care. In fact, the keepers would be doing us a favor—and adding to the Zoo's message

of conservation, to boot. After all, the Zoo doesn't just *care* about animal conservation—because animal and plant conservation is intertwined. Now, to move behind the scenes, to an area that the public very rarely sees, we turn to “The Back 40.” This large tract of land isn't actually 40 acres. And it might not even be around for many more years. But, while we've got it, we're working in conjunction with the keepers to turn part of this tract into a sustainable browse operation.

It's very much a work in progress. Thus far, we've given select keepers a tour of the property, to show them all the plant species available for browse.

The rest of the planning is being put into *their* hands. We've had some great conversations with them, and we have a good sense of what they want—and, likewise, they know what *we* want. We want to act as managers of the space, but aside from the occasional inventory or “stopping of cutting,” we're looking to be fairly hands-off. Because we trust that the keepers will respect our commitment to botanical sustainability.

The keepers have taken a particular interest in the idea of a grid system, where metal stakes will turn the tract into a number of plots. Each plot will be the same size, and they'll be large enough

that they'll each include a decent variety of plants suitable for browse. Each day (or week), the team lead will instruct a member of their team to harvest from a specific plot, and that keeper will harvest enough browse for their whole team—or, even more ideally, for the whole keeping staff. That browse will be placed in buckets of water in a designated area (for longevity), and keepers who need the browse will pick it up over the course of the next day or two (or seven).

The plot that's harvested from will rotate, thus preventing any one plot from being over-harvested. And flagging tape and spray paint will make it clear which plants have already been harvested from. The plan is for no more than 10% of a particular plant to be harvested at any one time. And the horticultural managers will remove flagging tape when a plant has sufficiently recovered. In the case that an entire tree or shrub is harvested, the stump will be spray-painted, so that, in the case of a stand of the same tree, it'll be clear that, say, 10% of all those trees were already harvested.

In theory, these are some of the agreed-upon tactics. But, there's no way to know for sure what will work until a growing season (or more) has passed, and things have been reevaluated. It'll be like a marriage. There will be good times and bad times. There will be times when one partner wants to walk away. But, with any luck, the union will be satisfactory enough for both sides that, in, say, a year, we'll both seek to renew our vows—but maybe with some amendments.

Clearly, the key to this union will be communication. We're planning to get a folder on *SharePoint* that both parties can access. Very clear identification information—including a “use this, not that” document that will prevent pitfalls among similar-looking plant species—will be found in this folder. Maps of the Back 40 grid system will be found in this folder. Every person will be part of an e-mail chain that will send out updates, such as “Stop harvesting poplars in Plot A1.”

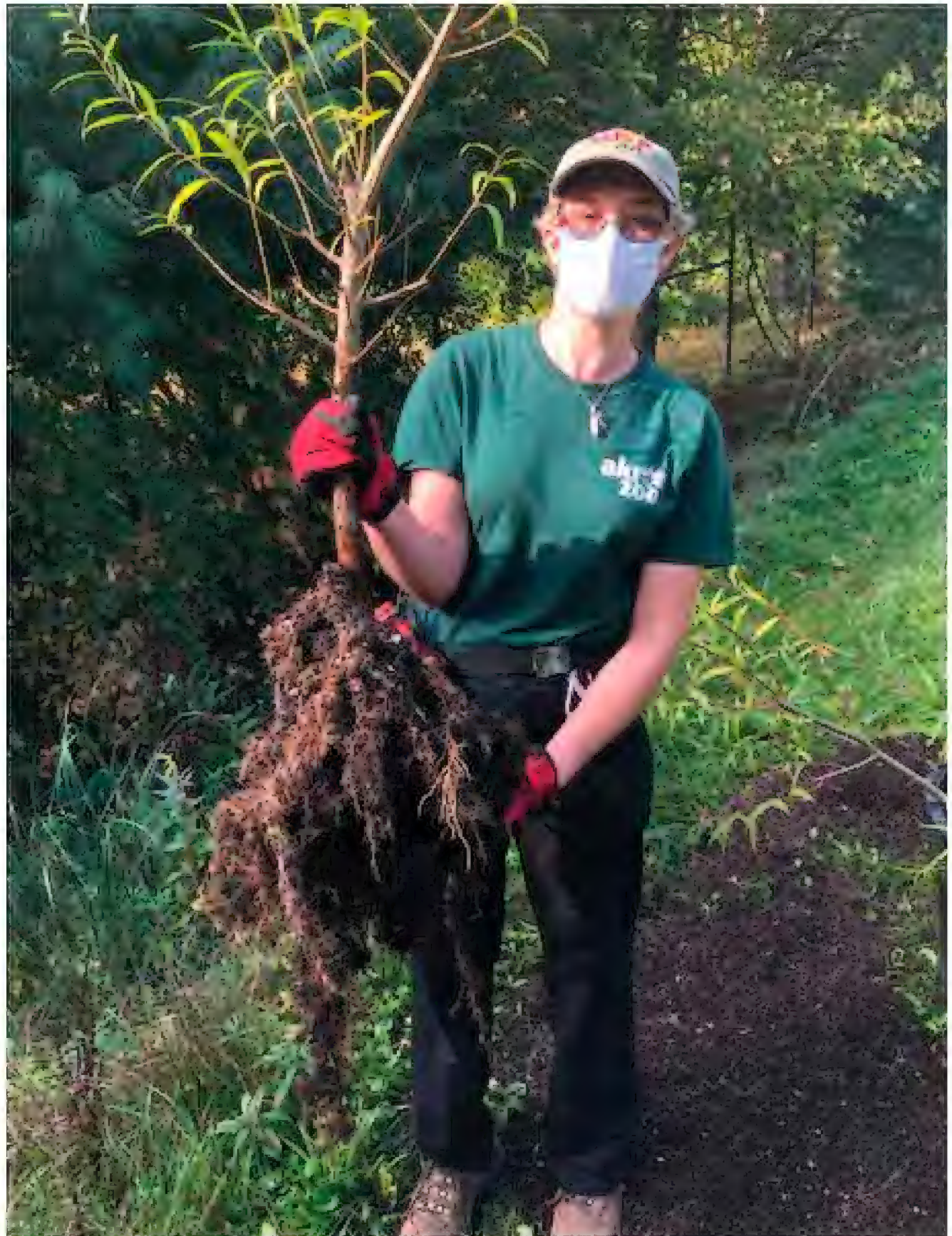
But, part of sustainable planning is to actually have new plants added into the equation. It's possible to literally just stick a cutting of various plants—including willows, red twig dogwoods, and forsythia—into potting soil, and after

a period, they'll root, and then those new plants can be planted out. In one of the bio-retention basins at the back of our parking lot, I started a "willow amphitheater" with about two dozen willow plants I started from cuttings I took last winter.

In time, these plants will grow dense, and they'll be even easier to access than the browse plants in the Back 40. Of course there's a limit on how much willow any one animal can eat in a short period of time, but it's a start. And maybe one day it can have a sign and become a demonstration garden for the public. It should also be encouragement to the keepers that, even with very little horticultural knowledge, it's easy to propagate new browse plants with almost no budget.

The photos on these pages reference the willow amphitheater. The photo to the right shows how extensive the root system of one example got in less than six months. In two or three years, these willows will probably be large enough to start taking browse from.

We have no propagation greenhouse. We have virtually no money to purchase supplies. We have no land for a formal, centrally-located browse garden. But, with our powers united, a grassroots browse campaign supported by both horticulture and animal care exemplifies adaptability. And, if we get an infrastructure in place, the pieces should really start to fall into place when money becomes available. The kinks will have been worked out, and the money will be used even more efficiently. 🐾



Horticulture seasonal Bethany shows off the root system of a 6 month-old willow cutting.

BIG CAT INTERNSHIPS AVAILABLE



Join us in

"Saving Tigers One by One"
As seen on Animal Planet®
"Growing Up Tiger"

Learn about Big Cat Management. Internship involves Animal Care Apprenticeship and Public Education. We offer experience that counts towards employment.



TIGER MISSING LINK FOUNDATION • TIGER CREEK WILDLIFE REFUGE • Apply at: www.tigercreek.org

Zoo Conservation and Cultural Divides: Understanding our past and looking to the future

*Karen Ross, Zookeeper
Audubon Nature Institute Species Survival Center
New Orleans, Louisiana
Miami University, Project Dragonfly*

Cultural diversity, in schools, businesses, and other organizations is a good thing. Benefits of a diverse workforce include: resilience to challenges, productivity, and flexibility, and relates the need for employers to seek out a wide range of experiences (Holm, 2013). Being mindful of creating diversity is becoming more and more important in the rapidly changing “Global Village” of businesses today (Forbes, 2002). We are currently in a time when a multitude of businesses, including zoos and other conservation organizations, have come to understand the importance of diversity and inclusion in making their goals successful, and have even included these ideals within their missions. Despite this, a younger generation of zoo professionals might not be aware of some of the historical issues that have led these institutions to the current lack of diversity, specifically in regards to race. Even though many zoos are located in cities with diverse populations, this is not well represented in staff demographics. For instance, a 2016 survey of the American Association of Zookeepers (AAZK) found that a whopping 95.1% of their members are white/caucasian (Colton et al., 2017). Although a dark past may be a contributing factor to this, a concentrated effort is being made for a brighter future.

Conservation efforts have historically struggled with the inclusion, protection, and promotion of cultural diversity. Around the mid-1990s, biodiversity protection strategies being proposed by worldwide organizations such as the International Union for the Conservation of Nature (IUCN), the World Resources Institute

(WRI), and the United Nations Environmental Program (UNEP) were cautious to acknowledge an interdependence of biodiversity and cultural diversity (Hyndman, 1994). They generally employed top-down strategies with none of the involved groups being accountable to indigenous peoples. Since that time, numerous studies have shown a mutual dependence between cultural diversity, indigenous knowledge, and biodiversity, often coining new terms such as “biocultural diversity” and “ethnobotany” (Gavin et al., 2015; Ramirez, 2005).

Ethnobotany, the study of plants and their uses through the culture and traditional knowledge of local people, was developed through the recognition that working with shamanic cultures in the Amazon in Colombia was useful for biodiversity conservation. Other global studies have revealed particular cultures’ ties to conservation, such as Buddhists in China or the sacred groves of India where faith systems that revere nature as a critical aspect of divinity have provided the world’s oldest forms of habitat protection (Dudley, Higgins-Zogib, and Mansourian, 2009). Similar linkages have also been found between the Gujar and Jat tribes in the Samahni area of Pakistan, which stresses the need to propose and promote perspectives that take conservation as a culture (Ishtiaq, Maqbool, and Hussain, 2012). Recently, conservation organizations are recognizing the need to respect and incorporate differing worldviews and knowledge systems into future conservation planning, as both human and ecological



communities are provided with a greater adaptive capacity with the use of diverse sets of knowledge (Gavin et al., 2015).

Conservationists in general have come a long way with respect to cultural diversity and inclusion. Western zoological facilities, however, are working to overcome a particularly tumultuous past with these concepts, from their beginning in the nineteenth century. Zoological collections first grew without much consideration for the places from which the animals came. Many of the animals brought to zoos, considered to be “flagship” or charismatic to the western world, were often sacred to indigenous people (Hyndman, 1994). It can also be argued that zoological gardens were not only built on a disregard of foreign cultures, but exhibit design was organized in such a fashion that it suggested a hierarchy within the human world (Wirtz, 1997). Animals were often seen inhabiting structures such as Chinese pagodas, eastern mosques, or Hindu temples, with the underlying implication that foreign cultures were closer to the animals and therefore inferior.

In what is probably the most shameful part of zoo history, exhibits did not only insinuate that other cultures were more like the animals being held, they went as far as putting actual people on display alongside them. A man named Ota Benga, a Batwa pygmy from the Belgian Congo, was one such case, housed inside the primate exhibit, with other animals, at New York Zoological Park shortly after the turn of the nineteenth century (Wirtz, 1997). Protests led by black ministers soon after put an end to the “exhibit”, yet these types of displays continued in other areas much later. Just short of the twentieth century, the Cincinnati Zoo “exhibited” a hundred Sioux Native Americans in a mock village for three months, and as late as 2007, Adelaide Zoo housed people, who were at least then allowed to return home at night, in a former ape enclosure by day (David, 2013).

One would like to believe that these racial and cultural divides are a thing of the past, yet there remains controversy around modern zoo design and displays of other cultures, such as the use of “African Villages”, where animals from

that part of the world are often displayed alongside representations of traditional huts as well as African performers and vendors. Since the 1930s, putting actual people inside exhibits became much less common, however, a zoo in Germany sparked outcry as late as 2005 for using “African tribesmen” in grass skirts by mud huts to show elephants and rhinos in their “natural habitat” (David, 2013). While zoo interpretation teams have more recently worked to separate the cultural aspects of displays from the actual animal exhibits, activists still often criticize these portrayals of Africa’s diverse environment and culture as reductive and contributing to racialisation. However, it also contended that these performances should be viewed in a context of migration and a circulation of the global labor force. Yet this view also comes with the ominous warning that people should consider the “insidious and cumulative” effects of trading in racial and cultural difference (Osayimwese, 2015).

Zoos have not only informed westerners’ world view, but also had the ability to shape the social landscape of the native urban areas in which they were located (Wirtz, 1997). When zoos were first established in large western cities and capitals, they were a means of bragging for civic pride and a commitment to scientific progress as well as a demonstration of wealth and culture (Mehos, 2006). Some even went as far as intentional exclusion. At the beginning of the Amsterdam Zoo, the founders purposely sought to establish a zoological garden and natural history museum that would be the focus of a private, bourgeois social club. The facility, founded in 1838, did not open to the general public until the twentieth century. Writers of the nineteenth century also began producing exposes on the “seamy underbelly” of urban life, where the same elitist, white, European culture was threatened by dark slums equivocated to wild savages (Wirtz, 1997), further creating a concept of otherness.

This long-standing history of being made to feel “other” could be a contributing factor to the lack of diversity in present day conservation organizations and zoos. An article by Dilen (2017) looks at visitors to cultural institutions such as museums,

theaters, and zoos, and addresses the need to examine what different people want out of these experiences in order to attract a more diverse audience. While she relates the major differing factors between people who already attend and what she calls “inactive visitors”, those with a propensity to attend but do not currently, one can draw parallels between those actively involved with zoos and those with recruitment potential. While there are many other demographic factors to consider, here, the number one attribute of active visitors is that they are white/non-Hispanic, while this attribute does not even make the list for inactive visitors. Both active and inactive visitors are more likely to have the attribute of higher education, yet 26.2% of black and Hispanic college educated people believed that cultural organizations were “not welcoming for people like me”. If zoos and other conservation organizations want the benefits that come with diversity, we must examine those “inactives” with recruitment potential, we must also make being a welcoming place our highest priority. Similarly, Ressurreição et al. (2012) examined willingness to pay (WTP) to prevent species loss of marine taxa between three different areas in Europe. While the majority of the public were aware of and interested in marine biodiversity, they found that different cultures put differing WTP values on different taxa. Just as organizations must consider what people want to get from experiences, they also must consider


Conservation efforts have historically struggled with the inclusion, protection, and promotion of cultural diversity.

possible cultural differences in what they value going in.

Given the tumultuous and colonialist past of conservation organizations and, in particular, western zoological facilities, it is not exactly a surprise that modern zoos are now struggling with diversity and inclusion initiatives that have proven to be beneficial for other businesses and workforces. Some great strides have begun towards inclusion though, starting with the recognition and discussion of this as an issue. Though the “immersive” exhibits still tend to put culture on display, most zoos now have entire teams of people dedicated to interpretation of such exhibits. Notably, Seattle’s Woodland Park Zoo’s “Maasai Journey” exhibit sparked some controversy in 2007, went to great lengths in planning to ensure that their “village”, with its inclusion of a teacher’s house and school, represented the Kikuyu culture as dynamic in response to social change (Osayimwese, 2015). They also employed African Maasai immigrants, not as a part of the exhibit, but as interpreters themselves, so that the culture was not misrepresented. Several other steps are being undertaken in the movement towards diversity and inclusion as well, such as sessions at American Zoological Association (AZA) and American Association of Zookeepers (AAZK) conferences to address the issue,

If zoos wish to reap the benefits that come with diversity, we must be able to demonstrate inclusivity, equality, and respect.

diversity committees being formed at institutions, and cultural workshops being held. For instance, at San Diego Zoo Global (SDZG), they hold workshops where they bring in partners from other countries to discuss their ideas, values, and roles in conservation (personal communication, SDZG employee).

If zoos wish to reap the benefits that come with diversity, we must be able to demonstrate inclusivity, equality, and respect. When it comes to attracting guests, some factors to consider include, but are not limited to, what differing groups of people want to get out of their experience and what their cultural values are going into it. As for recruiting staff, we need to be sure cultural differences are represented as equals in agency and respect, rather than being on display. In order to rewrite a historically exclusive narrative, we must make a concentrated effort to welcome and include more authors. 

Works Cited

- Colton, H., Murphy, D., Saffoe, C., Rodriguez, J., Ganame, I., and Zimmerman, K. (2017). Diversity and Inclusion in Animal Care Sciences. Retrieved from: <https://aazk.org/conference-proceedings/>
- David, M.B. (2013). Deep Racism: The Forgotten History of Human Zoos. Retrieved from: <https://popularresistance.org/deep-racism-the-forgotten-history-of-human-zoos/>
- Dilen, C. (2017). The Key to Reaching New Audiences for Cultural Organizations. Retrieved from: <https://www.colleendilen.com/2017/11/15/reach-likely-visitors-not-attending-cultural-organizations-data/>
- Dudley, N., Higgins-Zogib, L., and Mansourian, S. (2009). The Links between Protected Areas, Faiths, and Sacred Natural Sites. *Conservation Biology*, 23(3):568-577.
- Forbes, L.H. (2002). Improving Quality Through Diversity—More Critical Now Than Ever Before. *Leadership & Management In Engineering*, 2(4):49.
- Gavin, M.C., McCarter, J., Mead, A., Berkes, F., Stepp, J.R., Peterson, D., and Tang, R. (2015). Opinion: Defining biocultural approaches to conservation. *Trends in Ecology & Evolution*, 30:140-145.
- Holm, J. (2013). Planting the Seeds of Diversity. *JOM: The Journal of The Minerals, Metals & Materials Society (TMS)*, 65(7): 807.
- Hyndman, D. (1994). Conservation through Self-Determination: Promoting the Interdependence of Cultural and Biological Diversity. *Human Organization*, (3):296.
- Ishtiaq, M., Maqbool, M., and Hussain, T. (2012). Interrelationship of Cultural Diversity and Biodiversity and Its Impact on Conservation. *PAKISTAN JOURNAL OF BOTANY*, 44:245-256.
- Mehos, D.C. (2006). Science and Culture for Members Only: The Amsterdam Zoo Artis in the Nineteenth Century. Amsterdam University Press.
- Osayimwese, I.I. (2015). Armchair Safaris: Representations of African Cultures in Zoos. *Architectural Theory Review*, 20(3): 296-311.
- Ramirez, Z.G. (2005). Conservation of the Biological and Cultural Diversity of the Colombian Amazon Piedmont: Dr. Schultes’ Legacy. *Ethnobotany Research and Applications*, (3):179-188.
- Ressurreição, A., Gibbons, J., Kaiser, M., Ponce Dentinho, T., Zarzycki, T., Bentley, C., Austen, M. et al. (2012). Different Cultures, Different Values: The Role of Cultural Variation in Public’s WTP for Marine Species Conservation. *Biological Conservation* 145 (January):148-59.
- Wirtz, P.H. (1997). Zoo City: Bourgeois values and scientific culture in the industrial landscape. *Journal of Urban Design*, 2(1): 61.



ON AIR

The Keeper CHAT

A chat about AAZK's Evolving
Professional Development Program

READ MORE



Ruminations:

A Chat about AAZK's Evolving Professional Development Program By Wendy Lenhart, Column Coordinator

The year 2020 has brought a lot of change in how the world operates. Just as your day-to-day workday has likely shifted, AAZK has been adjusting its Master Plan to best serve a diverse membership in uncertain times. A major focus in this is the improvement of professional development opportunities. While the structural changes we discuss here have been in the works for longer than the pandemic has, the goal of AAZK National has been to grow with the membership's needs. Here, we speak with AAZK's Director of Professional Development and Conference Management, Bethany Bingham, about some notable changes.

AKF: As a former President of the Association and now in your new role, what professional development goals have been set for AAZK?

Bethany: AAZK leadership has identified four main focus points that will improve what we can do on a national level for our membership. These include the Conference experience, our relationships with learning partners, an AAZK Online reboot and filling in any resource "holes" to complete AAZK education.

AKF: From a personal perspective, I can say that attending my first AAZK National Conference was incredibly motivating and I felt there was a lot of value in it. How will this experience change after the craziness of 2020?

Bethany: We anticipate a hybrid model with virtual presentations being a standard component of the national conference moving forward. It is not solely an adaptation to the pandemic though. By exploring and ultimately offering this new format, we can better serve members who cannot attend conference in-person by recording and/or streaming presentations in totality, or by topics of interest.

AKF: Can we expect to see changes this year for the Los Angeles conference?

Bethany: One change with the creation of this position is that the AAZK Professional Development Team (formerly the Professional Development Committee) now reports to the Director of Professional Development rather than an AAZK national board member. Beginning in Los Angeles, AAZK is looking to shift the model of conference learning from listen>learn to contribute>learn by subtracting papers and adding in workshops. We will also plan to keep poster presentations as part of the format.

AKF: You mentioned that AAZK's relationships with learning partners could improve with regard to professional development opportunities. Could you give us an example?

Bethany: AAZK members, for the most part are volunteering their AAZK time on top of their job duties. We also have a rotating cast of national board members and conference hosts. With the addition of the Director of Professional Development staff position, AAZK can now provide a single point-of-contact for learning partners such as AZA and San Diego Zoo Global Academy, to improve the continuing education experience.

AKF: Do you have any upcoming partnerships that the membership would like to know about?

Bethany: We are excited to begin a multi-year partnership with AZA, beginning in 2021, offering an annual, joint panel discussion comprised of AZA and AAZK representatives that will discuss hot topics in the animal care and conservation field. The goal is to explore areas where our industry overlaps between institutional goals and the keeper knowledgebase.

AKF: I know AAZK Online has had some challenges with the navigation and the usefulness of some of the resources. Can you explain the rebrand?

Bethany: We would like to change the focus on the site from general education to AAZK-specific education. Beginning in 2021, we will start referring to the site as AAZK C.O.R.E., which stands for "AAZK Center for Online Resource Engagement." Access to AAZK C.O.R.E. is a membership benefit that we want to have value for the members.

AKF: What do you consider AAZK-specific education?

Bethany: We intend to move most member and Chapter resources to AAZK C.O.R.E. with the goal of transforming static learning to interactive instruction and engagement. By utilizing resources with written narrative and instruction and converting them to MS Powerpoint® presentations with voice-over narrative by the author and inserting video clips, AAZK can change to a more adaptive learning experience.

AKF: But what about aazk.org?

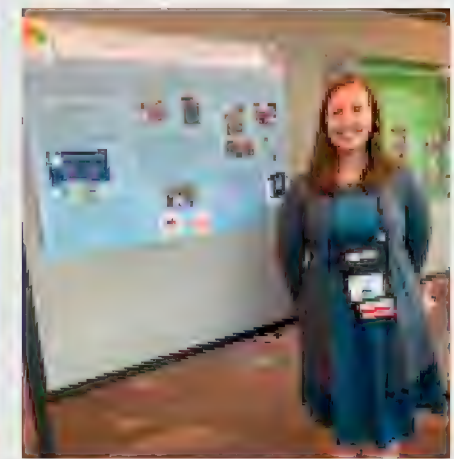
Bethany: The website for AAZK is primarily built for business function, housing membership purchase and renewal, AAZK product sales, a repository for forms (Animal Data Transfer, Grants and Awards), job seekers and career orientation.

AKF: What are your hopes for 2021?

Bethany: I think most people would say that anything is better than 2020 but in order to survive, AAZK knows it must change and adapt to keep pace with member expectations. While 2020 was a challenging year, someday the year will also be remembered for the many business-driven changes that resulted from a pandemic experience like no other.



The AAZK conference experience is evolving to better serve members who cannot attend conference in-person by recording and/or streaming presentations.



Despite a shift away from paper presentations to interactive workshops, keepers are still encouraged to present their accomplishments in the annual AAZK poster session.

AKF: Thanks for all the updates, Bethany. Is there anything especially fun or interesting that has come out of your team's recent work that you can summarize in a photo as "Click(er) Bait?"

CLICK(er) BAIT! Why did PDT use arguably nature's grouchiest-looking felids for their new logo? The answer may not be what you think!*



Bethany: Ha, nice lead-in. As you mentioned before, the annual AAZK National Conference allows keepers to come together, exchange ideas, solve problems, and grow the profession. PDT was similarly inspired by a paper at the 2019 Conference highlighting how two male fishing cats were integrated into a shared exhibit at the Denver Zoo. The themes in the presentation checked the same boxes we want for AAZK professional development moving forward: to be innovative, communicate through shared experiences and to improve the system for everyone (and every creature) involved.**

AKF: 😊

**CLICK(er) BAIT! Is just a silly caption section below our Ruminations interview. Wendy doesn't actually think fishing cats are nature's grouchiest-looking cats. They are very nice.*

***Check out the 2019 AAZK National Conference Proceedings at aazk.org to learn more about the inspirational fishing cats in the PDT logo.*

You CAN Teach an Old Camel New Tricks: Navigating the challenges of wound treatment in a protected contact setting

*Britni Steingard, Senior Keeper
Zoo New England
Boston, Massachusetts*

Introduction

Bactrian camel (*Camelus bactrianus*) Gulliver, was born at the Milwaukee County Zoological Gardens in Milwaukee, Wisconsin in 1994 and moved to Zoo New England's Franklin Park Zoo in Boston, Massachusetts later that year. He called Franklin Park Zoo his home until his passing in February 2018. In October of 2015, I became his primary trainer after his previous trainer accepted a position at another facility. She had already taught him several behaviors including: moving forward and backward, following, targeting, and positioning several body parts for injections, radiographs, and blood draws.

In June 2016, keepers discovered a small puncture wound, of indeterminant origin, in Gulliver's chest-pad, the tough, calloused patch of skin at the sternum, after observing blood running down the inside of his front legs. Because of his previous training, Gulliver allowed one of our veterinarians to clean and bandage the wound several times during the summer, but in autumn he became increasingly reluctant to participate in training sessions when a vet was present. In response, our Associate Veterinarian, our Animal Training Advisor, and I developed a plan

and began weekly training sessions dedicated to treating and documenting Gulliver's chest-pad wound. This article will describe that program and the lessons we learned along the way.

Training Area

Camels at Franklin Park Zoo are trained using protected contact. The camel barn consists of three stalls and a storage room. Attached to the barn are three yards surrounded by a chain link fence: the "exhibit," the "large yard," and the "small yard." (Figure 1)

The barn is not equipped with a squeeze chute or tamer. Training sessions take place either inside the barn at a modified doorway designed to facilitate training, or in the small yard on a 4-foot by 11-foot paved area rimmed by two-by-fours and the chain link fence. The poles supporting a truck gate along the fence line provide an access point large enough to perform minor veterinary procedures such as injections. The paved area and two-by-fours act as

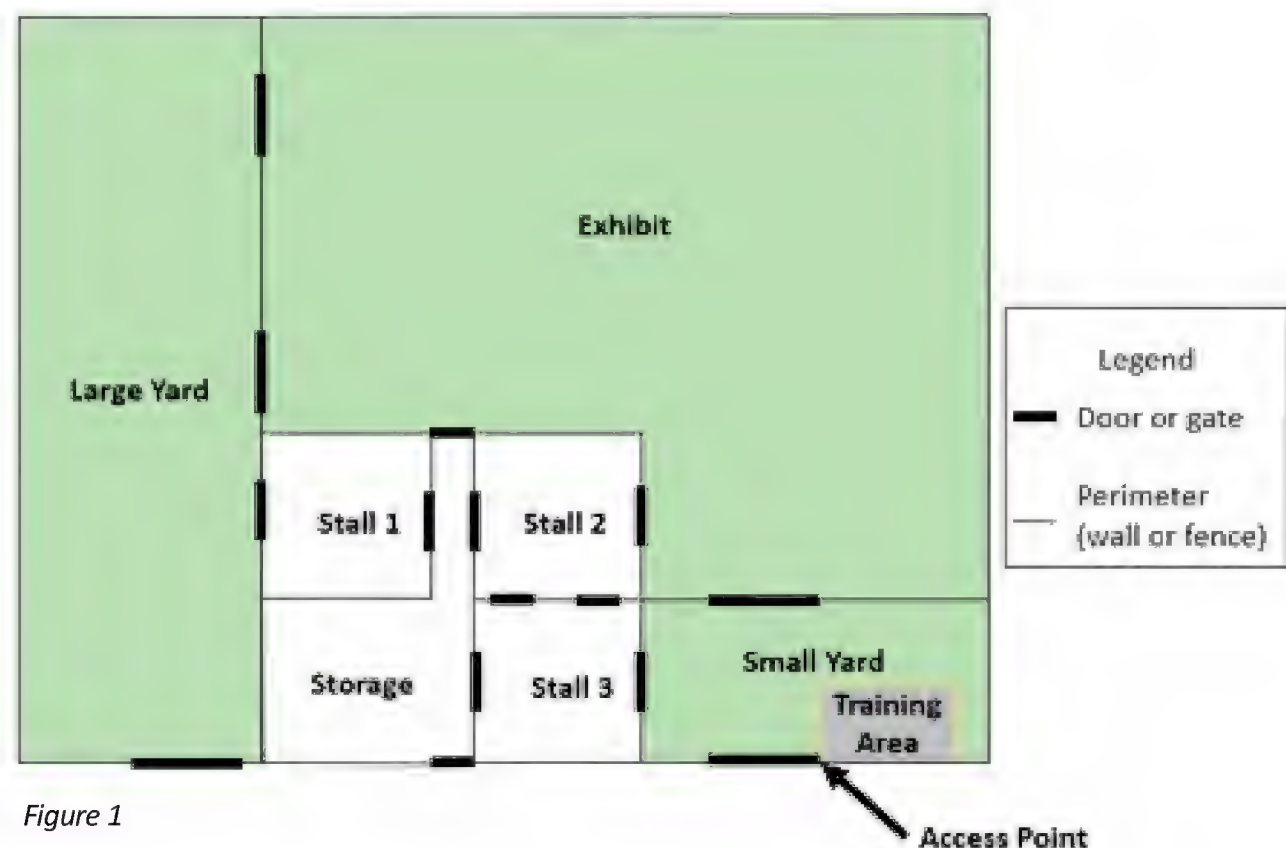


Figure 1

a guide for the camels and in no way restrict their movement.

Training Progress and Shaping Plans

The veterinarian successfully cleaned Gulliver's chest-pad wound approximately twice monthly from June through October 2016, but in November, Gulliver abruptly stopped complying with chest-pad cleaning when the veterinarian was present. Our goal in rebuilding this behavior was for Gulliver to focus on the trainer instead of the vet and to allow the vet to move as needed to clean the wound. Additionally, we aimed to desensitize Gulliver to a selfie stick, which would enable us to safely document wound progress via photographs.

Shaping Plan: Desensitize Gulliver to the vet's presence

- Position the vet at the access point, with selfie stick held by their side.
- Cue Gulliver to "follow" to the training chute, walking past the vet.
- Bridge and reward with an alfalfa cube for following the trainer to the desired position.
- Bridge and reward with a jackpot of several alfalfa cubes for holding position.
- Gradually increase duration of holding position with the vet present.

- At the end of the session, the vet feeds Gulliver to foster a positive relationship.

After a few sessions Gulliver began to focus more on me, paying little attention to the vet. In this earliest phase, the vet and I worked with Gulliver while the Training Advisor observed and offered counsel. Once Gulliver was acclimated to the vet, the advisor occasionally took the vet's place in training if he was unable to attend.

Shaping Plan: Acclimate Gulliver to the vet's movement

- Once all are in position at the training area, cue Gulliver to "hold." The vet takes a single step toward the fence and back. Bridge and reward Gulliver for remaining in position. Give a jackpot if he continues looking at the trainer instead of the vet.
- For the next approximation, the vet takes two steps forward and back. Bridge and reward Gulliver for remaining still.
- Continue approximations until the vet can approach the fence, crouch for at least four seconds, and return to their starting position without Gulliver looking away from the trainer or stepping away from the fence.

When we began phase two, I gave a "crouching" cue to both let the vet know he could begin crouching, and cue Gulliver that the vet would approach. Once Gulliver was comfortable with the vet's proximity, we stopped using the "crouching" cue. Instead I would ask Gulliver to "target" and "hold," then I would count out loud while the vet crouched next to Gulliver. Prior to the target cue, I would communicate to the vet how many seconds I would be counting. This way the vet knew when to step back and Gulliver learned to hold still as long as I was counting. This seemed to prevent him from losing interest mid-behavior and helped him hold position for longer periods of time.

We next needed to desensitize Gulliver to both the vet's arm and the selfie stick approaching his chest-pad. We considered placing a mirror box on the ground to view the wound, but we were concerned that Gulliver would either step onto the box or have difficulty stepping over it. Furthermore, during cleaning and bandaging, the vet's arm would likely block the mirror, obstructing his view of the chest-pad. A selfie stick seemed the safest way to obtain photographs and could be used to view the chest-pad for bandaging in the same way a dentist uses a mouth mirror.

Shaping Plan: Acclimate Gulliver to photography

- The vet crouches next to Gulliver and lifts the selfie stick, holding it next to the fence.
- Bridge and reward Gulliver for standing still. Give him a jackpot if he keeps his gaze on the trainer.
- Using gradual approximations, the vet positions the selfie stick under the chest-pad.
- Gradually increase the amount of time the vet holds the selfie stick under the chest-pad.
- Introduce the cell phone. Repeat the process with the cell phone attached to the selfie stick.

We used a non-functional selfie stick for training and only used our functional one when Gulliver was ready for photographs. In this phase we also continued the practice of asking Gulliver to "target" and "hold" while I counted



Photo by Alex Becket



Photo by Chelsea Lundblad.

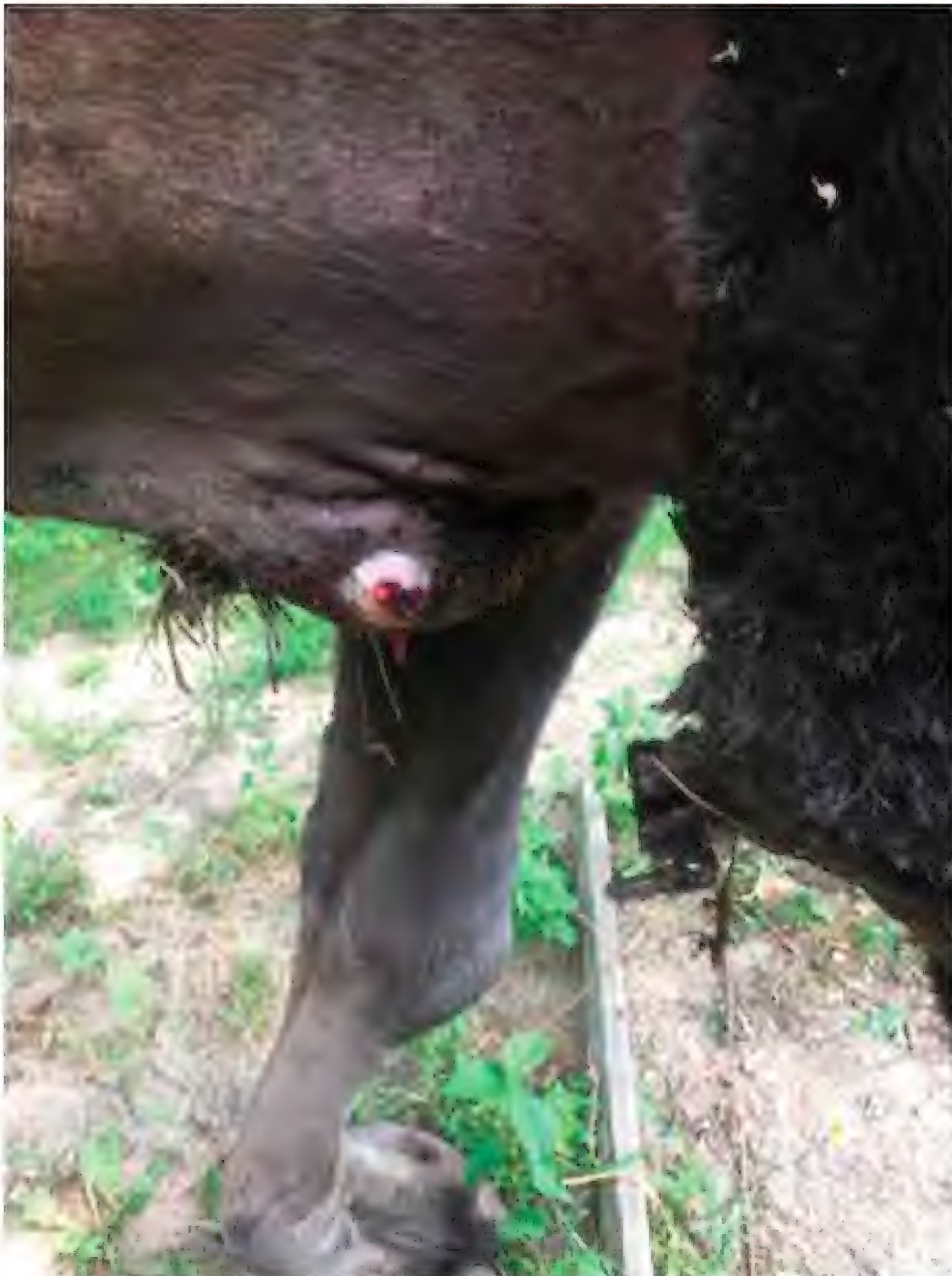


Photo by Amanda Caulfield.

out loud. We first attempted to take photos with the selfie stick in January 2017. Initially Gulliver shied away from the phone, despite having allowed us to photograph his wound in the past. By following our shaping plan we obtained seven seconds worth of photographs within a single, 15-minute training session.

Seasonal Challenge: Rut

The Bactrian camel breeding season, also known as rut, takes place between October and April. This time period is typically characterized by decreased appetite and increased aggression (Vyas et al., 2015). Through autumn 2016 Gulliver became decreasingly interested in food – including training treats – and increasingly interested in our newly acquired female, Zowie. Being exhibited in separate yards, Gulliver often vocalized or paced near doors and windows if Zowie was out of sight. In February, Gulliver began to show signs of increased aggression, such as grabbing the feeding tongs out of my hand. If training sessions happened at all during the winter they were brief and Gulliver’s limited interest put our sessions with the vet on hold until the spring. In May, I began re-acclimating Gulliver to chest-pad viewing by myself with the intention of working again with the vet once I could reliably hold Gulliver’s attention for several minutes. At the end of June 2017, during our longest training session since February, I found a second wound, again of indeterminate origin, on the right lateral side of Gulliver’s chest-pad. The vet and I began training Gulliver for chest-pad cleaning again in July 2017.

Shaping Plan: Cleaning the wound

For the last phase we introduced a bamboo backscratcher to distract Gulliver from the vet’s activity near his chest-pad and learned that it also worked well as a secondary reinforcer.

- With Gulliver in position, the vet scratches Gulliver’s flank using the back scratcher.
- With Gulliver standing still, the vet gradually crouches by Gulliver’s chest-pad.
- The vet, still scratching Gulliver’s flank, approximates an extended arm holding a dilute-chlorhexidine-

soaked gauze pad towards the wound. Bridge and reward Gulliver for standing still.

- Continue approximations until the vet can completely clean the wound with the gauze. Bridge and jackpot Gulliver for standing still throughout cleaning.

At the beginning of the process I fed Gulliver a constant stream of alfalfa cubes, but as we continued I gradually slowed the feeding rate. Gulliver willingly held still for photographs for several minutes as long as the photographer was also scratching his flank with the back scratcher. We also resumed the practice of ending each session with a jackpot of alfalfa cubes fed by the vet to continue relationship building. From this point we returned quickly to cleaning the wound as we had done the previous summer. On July 26, 2017 the vet cleaned and obtained tissue samples from both wounds.

Conclusion

In August 2017, we sedated Gulliver to examine his chest-pad more closely. Our veterinary team collected blood samples, administered antibiotics, obtained radiographs of Gulliver's chest-pad, and biopsied the right lateral chest-pad. Through this examination we determined that the two wounds were in fact a single fistula – a narrow passage from one side of the chest-pad to the other. Gulliver became wary of the vet again shortly after his procedure, but allowed his trainers and keepers to continue cleaning both wounds until the winter.

Our dependence on Gulliver's participation due to the lack of a squeeze chute or tamer was our biggest obstacle in meeting this challenge, especially during breeding season. By using common objects one might find at home - such as a back scratcher, a cell phone, and our Curator of Mammals' unwanted selfie stick - we could work safely with the space we had. This process also served as an excellent reminder to try more than one type of reinforcement. Gulliver had always trained readily for alfalfa cubes but in this case the back scratcher achieved greater results.

Acknowledgements

I would first like to thank Associate Veterinarian, Alex Becket, and Training Advisor, Kim Kezer, for all of their assistance in training Gulliver and in treating his wound. Furthermore, I would like to thank Kim for assisting me in editing this article. I could not have completed this process, from shaping plan to publication, without her. We would all like to thank Nicole Beaupre for the great training foundation she laid for Gulliver and me. We would also like to thank my former Lead Keeper, Amanda Caulfield, and former secondary trainer, Miranda Beran, for all of their support in working with Gulliver. In addition to assisting with chest-pad cleaning, they were instrumental in maintaining many of Gulliver's other behaviors, such as blood draws, and in preparing him for his 2017 sedation. Lastly, we would like to thank all of the Hooves and Horns keeper staff, interns, and volunteers as well as the members of the Zoo New England Animal Health and Conservation Medicine department for their efforts in monitoring Gulliver's health and for their assistance with chest-pad cleaning. 🐪

Works Cited

Vyas, S., Sharma, N., Sheikh, F.D., Singh, S., Sena, D.S., and Bissa, UK. (2015). Reproductive status of *Camelus bactrianus* during early breeding season in India. *Asian Pacific Journal of Reproduction*, 4(1):61-64. Retrieved November 12, 2018 from <https://ac.els-cdn.com/S2305050014600609/1-s2.0-S2305050014600609-main.pdf?tid=8bed252f-0f06-45db-a0d0>

Training Tales Editorial

By Angela Binney, Training Tales Column Co-Editor

I am impressed with the dedication and attention to detail and ongoing partnerships involved in the wound management for this camel, Gulliver. Working through the challenges in relation to the disposition of the camel, the infrastructure, and medical needs, the team was able to provide much needed wound care and monitoring. This sort of creative problem solving, as is often the case in animal care, is born from a marriage of art and science. The need to employ both strategies is especially relevant to animal care because animals, quite literally, have a mind of their own and often have a complete disregard for their care providers' plans. Sometimes we can fly by the seat of our proverbial cargo pants from training session to session, tweaking a relatively fluid plan without much resistance. The success of this approach speaks volumes about the intuitive nature of animal keepers (the art). However, sometimes, there are more complex cases with extraneous variables (chronic wound therapy, rut, and the need to incorporate medical care, for example) that require a more systematic approach. Well defined approximations that progress based on specific, sometimes measured, parameters (the science) can help navigate these difficult situations and allow a slower but deliberate path to success. Thank you, Britni, for sharing your Training Tale, and your hard work and dedication to the welfare of Gulliver during his challenging medical case.



Connecting Careers to Colleges: Hosting a career exploration event for college students

Kathryn Juliano, Animal Keeper, Smithsonian's National Zoo and Conservation Biology Institute, Washington, DC
Hilary Colton, Animal Keeper, Smithsonian's National Zoo and Conservation Biology Institute, Washington, DC

In October 2020, the National Capital AAZK Chapter (NCAAZK) hosted an online Career Exploration event highlighting a variety of careers within the zoological field. The coordination of the career event took almost a full calendar year, due mostly in part to the COVID-19 pandemic. This article details how the event originated, the obstacles that were overcome, and the successes found in its final presentation.

Many animal keepers seek to guide and educate the next generation of keepers, and AAZK Chapters can be a way for keepers to fulfill this goal. NCAAZK has supported education to a variety of audiences, and the Chapter won the Janet McCoy Excellence in Public Education Award in 2019 for its outreach and education efforts. One of its members, Smithsonian's National Zoological Park (NZIP) animal keeper Katy Juliano, was interested in specifically increasing career-focused education aimed at college students.

Katy is a graduate of the University of Maryland (UMD) Animal Science department and has maintained a

relationship with the department's coordinator of internships and career education. Through this relationship, Katy has met numerous college students who have expressed that they didn't know about careers within zoos. After giving a presentation at UMD earlier in the fall of 2019, Katy considered the possibility of hosting a career event for college students through NCAAZK. She reached out to Hilary Colton, animal keeper at the Smithsonian National Zoo and NCAAZK President, with the proposal and was referred to the NZP Volunteer department, as they have previously facilitated many such experiences.

Katy met with Kirstin Hill, a Conservation Engagement Manager, to discuss creating a career event like this and potentially hosting it in-person on the Smithsonian National Zoo's campus. Kirstin has years of experience in education and was able to coach Katy in setting goals for educational events, selecting a target audience, and creating a format. This conversation helped turn a vague idea of an event into a very concrete plan, and without Kirstin's

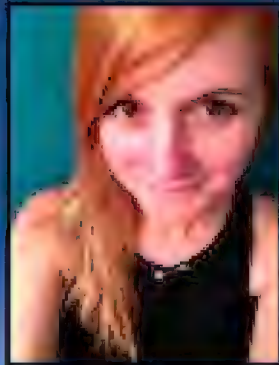
initial advice the event would likely not have been as successful.

As a result of the discussions with Kirstin, the goal and audience of the event became very clear: to expose undergraduate college students to the variety of careers within the zoo field, not only animal keeping. Possible formats included networking in breakout groups with professionals, meeting for small question and answer sessions, or having a series of presentations from different speakers. To meet the goal of exposing many students to multiple different careers, a formal panel with questions and answers was the selected format.

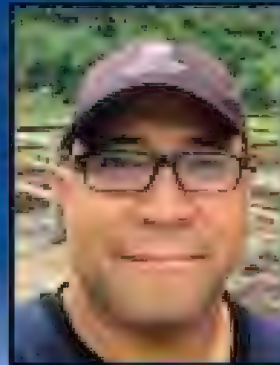
Once the goal and format were selected, Katy discussed the event with the UMD Animal Science department to see if they would be willing to physically host the event. With space offered to host the event, Katy began reaching out to find speakers. Hilary and Katy brainstormed how to create a diverse panel with staff that hold various positions within the zoo setting and come from different backgrounds.



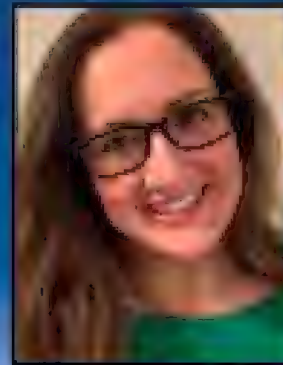
ZOO CAREER EXPLORATION PANEL



ELISE BERNARDONI
Assistant Director,
Education Programs



NEEL AZIZ
Supervisory
Veterinary Medical
Officer/ Pathologist



BETSY HERRELKO
Animal Welfare and
Research Manager



JUAN RODRIGUEZ
Curator of
Carnivores of Asia
and South America



HILARY COLTON
Animal Keeper,
Amazonia Unit,
NCAAZK President

October 8, 2020 | 6pm

Zoom ID: 807 957 3356

Password: 608094

**Learn about different careers at
the Smithsonian National Zoo.**

Questions: julianok@si.edu

They decided to have five career types among panel participants: an education specialist, a veterinarian, a veterinary technician, a behavioral researcher, and an animal keeper. Another education specialist was selected to be the moderator for the discussion.

All of the panelists were confirmed, and the location, date, and time were all selected for April 2020. As most readers could predict, the in-person event did not happen due to the COVID-19 pandemic. For a few months, everyone was adjusting and our AAZK Chapter was not an exception. By summer, though, it was clear that the event should not happen in person in the fall semester, and Katy and Hilary began replanning the event to move to an online format.

The structure of the event would remain the same, so the biggest adjustment was learning to use the online platform. Both Katy and Hilary had attended Zoom events as participants and hosts, and the Smithsonian Institution had contracted Zoom accounts capable of hosting large numbers of people. Unfortunately, some panelists were no longer working at

the National Zoo, and so new panel members had to be selected. Hilary stepped in to represent animal keepers on the panel, and Katy was selected to serve as the moderator. Katy communicated with the University of Maryland to see if an online event would be an option, and they were excited to have their students attend.

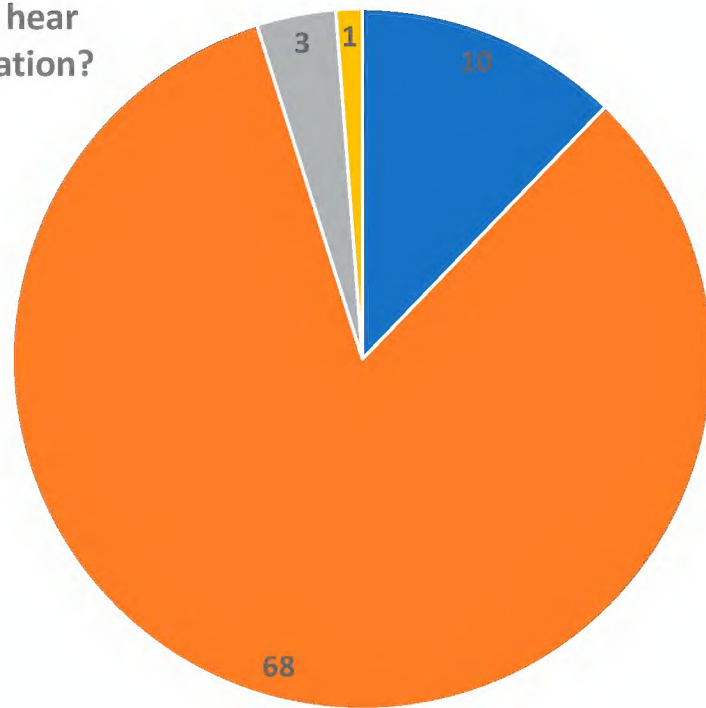
The move to an online platform opened up the event to have a much broader reach than initially planned. Instead of hosting a physical event at the University of Maryland campus, which would naturally limit the number of other students that could travel to the school; the new event could easily be attended from anywhere. NCAAZK created a Facebook event and flyer and started sharing the event with universities in the local area. These were schools that NZP/NCAAZK had previous relationships with, as well as some local STEM groups. In total, 18 universities were e-mailed, and 60 people responded to the Facebook event. The event was also shared with NCAAZK members, volunteers, and interns at the National Zoo.

Leading up to the event, Katy, Hilary and other NCAAZK leadership held technical run throughs to ensure that the security settings for the Zoom meeting would be correct. The meeting did not allow attendees to turn on their camera or microphone, and the group chat was eliminated. Panel speakers were made into “co-hosts” so they were able to have their cameras and microphones on. A backup webinar appointment was created ahead of time and officers were ready to share that information so that should something go wrong, attendees would quickly be redirected via the Facebook page.

For the actual event, an NCAAZK member served as a technical moderator to check that safety settings were correct, receive questions from attendees, display a PowerPoint presentation with relevant information, and start and stop a recording of the meeting. Panel members met 15 minutes before the event to ensure that everything was working correctly and review the question style. The event began with a survey for attendees to learn more about who was attending and

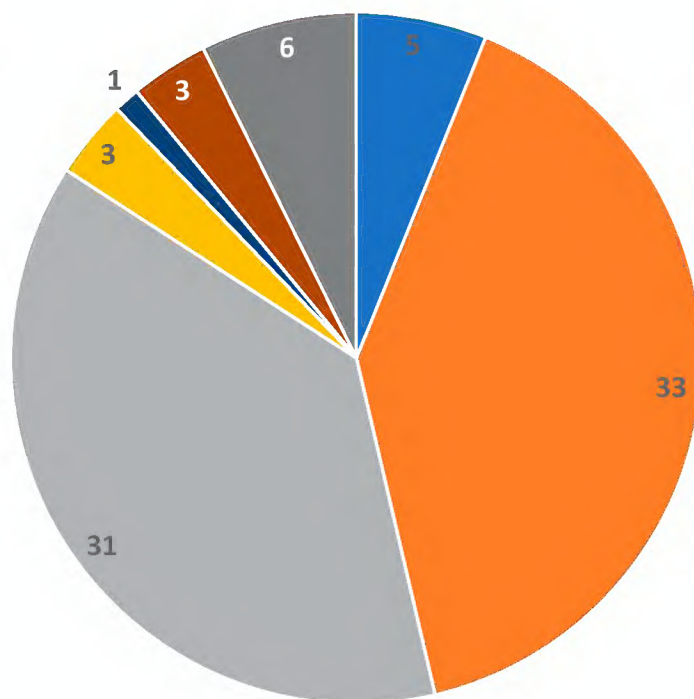
Question 1: How did you hear about this Zoom presentation?

- Facebook
- Email from school
- Heard from friend
- Other



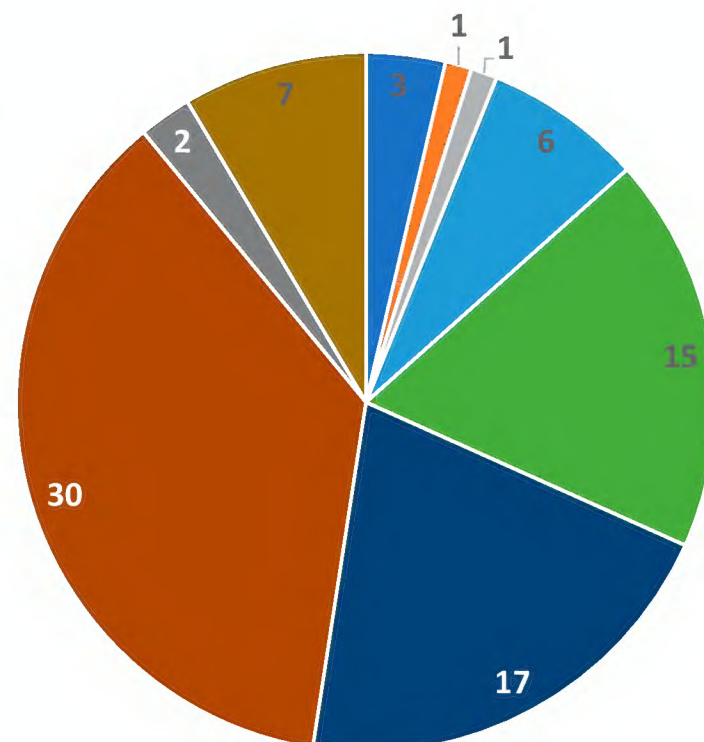
Question 2: Where do you study?

- DC college
- VA college
- MD college
- Other college
- DC high school
- VA high school
- MD high school
- Zoo
- Other



Question 3: What is your academic level?

- 9th grade or earlier
- 10th grade
- 11th grade
- 12th grade
- Freshman
- Sophomore
- Junior
- Senior
- Fifth year or more
- Other



how they heard about the event. After approximately 10 minutes, the event began with an introduction about how the event would run and information about AAZK national, the NCAAZK Chapter, and the Smithsonian’s National Zoo & Conservation Biology Institute. Membership benefits for AAZK & NCAAZK were highlighted for students interested in getting involved in the organizations.

Prior to the event, panel participants were told of the first few questions that were going to be asked before starting a Q&A from attendees. These questions included “What would surprise others about your job?”; “What was your path to your current position?”; and “What is a typical day like for you?”. As questions came in from the audience, the technical moderator would send them on to the moderator. This allowed Katy to focus on facilitating the discussion while the technical moderator could focus on selecting appropriate questions to ask. After an hour and a half, the event ended with information about how to find volunteer positions and internships at the National Zoo, further resources including links to the AZA website, and information about AAZK and membership.

In total, 115 attendees joined the meeting. The survey reported that over 80% of participants were college students in DC, Maryland, or Virginia. 83% of attendees had heard about the event from a professor or their college, which was surprising because only three of the 18 universities responded to e-mails about the event. 58% of the attendees were college juniors or seniors. From this information, the event reached the target audience of local college undergraduate students looking seriously at career opportunities.

There were some surprising results about how the event had been shared as well. There were attendees attending from as far as Texas and Indiana. A few participants were passionate Smithsonian’s National Zoo fans who heard about the event from Facebook. Some NZP employees also joined the event to learn more about different jobs in the zoo. Panel speakers also responded that they learned a lot about each other and were interested to learn more about each other’s background.

A debrief was held after the panel presentation with Katy, Hilary, and the tech moderator, where it was agreed that some changes could have been made to improve the event. A Zoom meeting was used, but a Zoom webinar would have provided default safety settings and a better question and answer function. The moderator, Katy, could have asked more questions to fewer participants, targeting the topics to the individual's specialties. The survey could also have been more specific to gain more information, or a survey could have been sent afterwards to make connections with the attendees.

Overall, the event reached its target audience and seems to have been well received. The move to an online format was beneficial to the Chapter as a way to continue educational opportunities that have been cancelled due to COVID-19. Additionally, the event offered the ability to be more accessible to communities where it might be cost-prohibitive or difficult to travel to a zoo and attend a physical event. An internet connection was the only requirement to attend, which created the potential for targeted audience demographics to learn more about the science of animal care.

In the future, NCAAZK hopes to host a similar event next fall highlighting different careers at the zoo. NCAAZK is currently working on an event that focuses on zookeeping as a career and features panel members from different AAZK Chapters across the country in spring 2021. Look for more information online and on Facebook about the event.

If anyone has any questions about how to host an event similar to this, please reach out to NCAAZK at ncaazk@si.edu. The event took a little bit of planning but was a relatively easy way to reach out to many students at once. 🐢



HIGH OUTPUT UVB & HEAT

POWERSUN H.I.D. METAL HALIDE UVB LAMP & LAMP FIXTURE

- High output **UVB** lamp for larger habitats.
- Truly **SUN-LIKE BRIGHT NATURALISTIC LIGHT** for terrariums.
- **6500K** color temperature & **95 CRI** for amazing color combined with **UVB, UVA, & HEAT** from one lamp!
- Proprietary **ZOO MED** lamp construction creates a true flood-lamp effect, eliminating dangerous UV "hot-spots" common to many other metal halide reptile lamps.
- Full one year guarantee.



NANO FIXTURES & LAMPS

Nano lamp fixtures and lighting specifically designed for terrariums 10 gallons or smaller.

For more information regarding our Nano, Powersun H.I.D. or any of our other fine products, please visit our website bellow.



Actual size



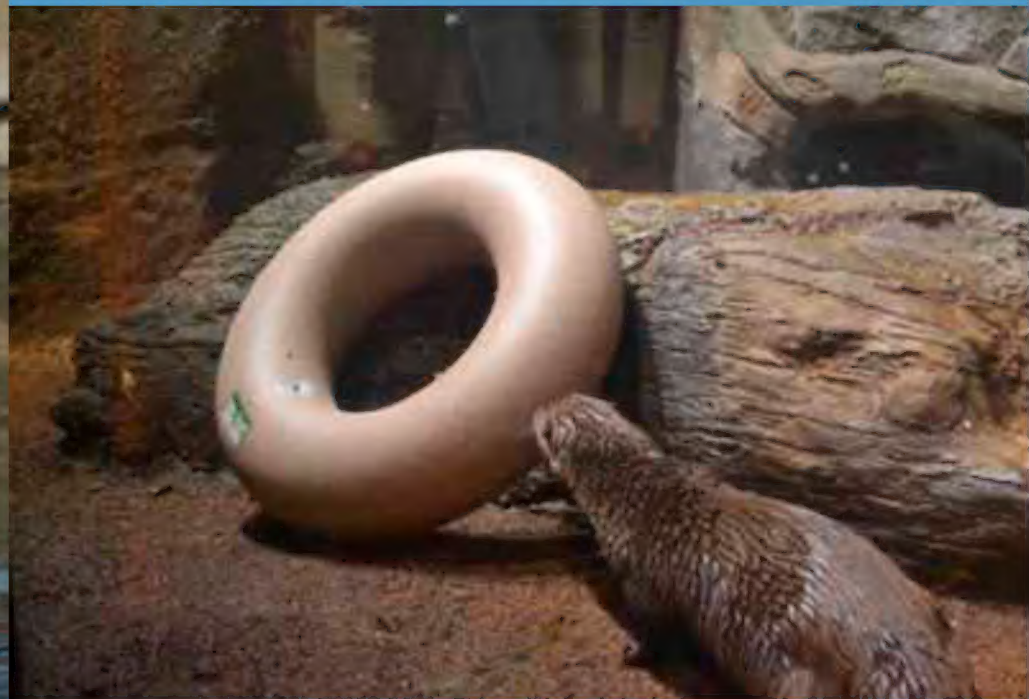
WWW.ZOOMED.COM



Welcome 2021!



We manufacture the best animal enrichment available. Let us help you!



Helping Professionals Mold Enrichment



2401 Phoenix Ave NE
Albuquerque NM 87107
www.wildlifetoybox.com

Ph: 866.793.0376
E-mail: sales@wildlifetoybox.com

A Proud Product Line of Desert Plastics



8476 E. Speedway Blvd.
Suite 204
Tucson, AZ 85710-1728
U.S.A.

“Dedicated to
Professional Animal Care”



 [facebook.com/AAZKinc](https://www.facebook.com/AAZKinc)

 [@AAZKinc](https://twitter.com/AAZKinc)

Sound Nutrition for Nature's Royalty



Central Nebraska Packing, Inc. offers:

Classic & Premium Frozen Carnivore Diets

• ALSO AVAILABLE •

HORSE SHORT LOINS / HORSE & BEEF BONES

MEAT COMPLETE **WITH TAURINE** (RAW MEAT SUPPLEMENT FOR ALL CARNIVORES)

MEMBER: AZA | AAZV | AAZK

NEBRASKA BRAND



877.900.3003 | 800.445.2881

P.O. Box 550, North Platte, NE 69103-0550

info@nebraskabrand.com • nebraskabrand.com

FELINE & SENIOR FELINE | BIRD OF PREY | CANINE | SPECIAL BEEF FELINE