ADVANCING BEAR CARE

BEAR CARE GROUP | MAY 28-29, 2025

OVERVIEW

Welcome

The Bear Care Group is excited to host the Advancing Bear Care 2025 virtual two-day conference. This year's theme is "**BEARing with Temporary vs. Permanent: Outcome-based Husbandry"** and builds on themes discussed during the in-person ABC 2024 Oakland conference. This two day virtual conference compares and contrasts the significant management considerations necessary to maximize welfare of rescued wild bears in both temporary and permanent human care.

Mission Statement

The Bear Care Group fosters improvements in global bear welfare and conservation through communication, cooperation, and education among international bear care professionals. We accomplish this by i) advancing and sharing information on bear behavior, husbandry, enrichment, training, veterinary care, and other welfare-related topics, ii) organizing bear care conferences and workshops focused on educating and sharing information to improve global bear welfare, and iii) producing publications and resources to support bear care professionals in achieving excellence in bear husbandry and care.

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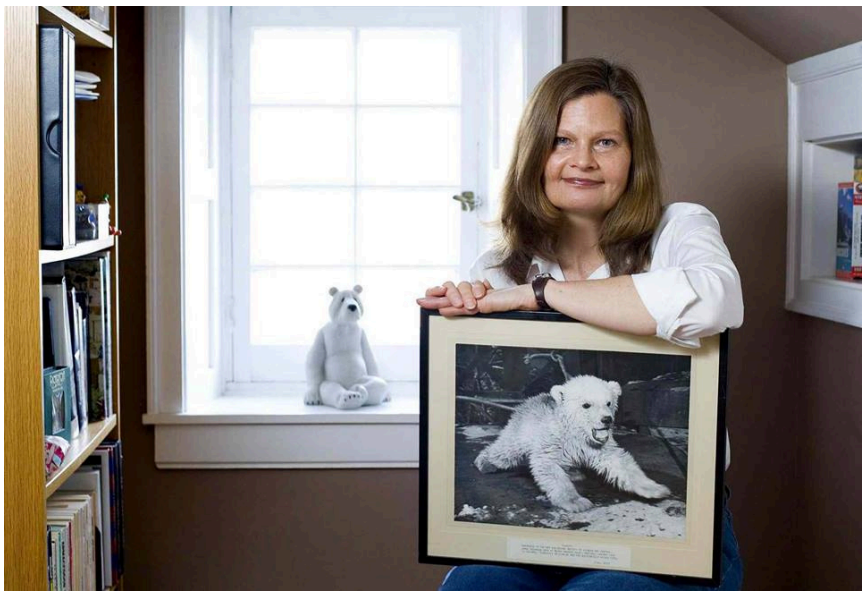
Bear Care Group Founder: Else Poulsen

“Who are you?” and “What can I do for you?” are two of the questions the late Else Poulsen asked every bear she worked with. “Best known for rehabilitating bears from the psychological trauma of captivity, Poulsen dedicated her life to improving their quality of life. She did this through her work as a zookeeper at the Calgary and Detroit Zoos and in one-on-one consulting with zoos, sanctuaries, and wildlife rehabilitators, where she helped bears in distress. She was generous with advice and was the founding president of the Bear Care Group, a network of international bear care professionals who shared experiences and information to improve bear welfare and conservation worldwide.” (Neme, 2016) Else founded the Bear Care Group following her vision to improve the wellbeing and welfare of bears around the world. She dedicated her entire life to caring for animals, and was an enduring font of wisdom and knowledge regarding the nature and care of all bears. Else was fully committed to bears and their caregivers, ensuring a nonpartisan environment would exist within the BCG so that any individual wanting to become a better caregiver for their animals would be welcomed, regardless of their organization or history. Else was integral in creating partnerships with international animal welfare organizations, such as Animals Asia and Wildlife SOS, who continue to collaborate with and support the BCG. Else has over forty publications to her name and significantly contributed to the textbook Stereotypic Animal Behavior – Fundamentals and Applications to Welfare, 2nd Edition. Her first bear book Smiling Bears – A Zookeeper Explores the Behavior and Emotional Life of Bears was published in May 2009. Her second book, Bärle’s Story - One Polar Bear's Amazing Recovery from Life as a Circus Act was released in Spring 2014. Else was a fierce protector of bears, selfless and tireless in her dedication, and a true inspiration to us all. The Bear Care Group will continue to uphold Else’s ideals and goals to improve the welfare of bears everywhere, providing resources and expertise for their caregivers.

Neme, L. (2016, April 20). Remembering the Woman Who Helped Bears in Distress. National Geographic.



BEARING WITH TEMPORARY VS. PERMANENT: OUTCOME-BASED HUSBANDRY

ABC 2025 PROGRAM

ABC VIRTUAL CONFERENCE 28 MAY 2025

12:00pm - 4:30pm Eastern Daylight Time
(5:00pm – 9:30pm British Summer Time)
(6:00pm – 10:30pm Central European Daylight Time)
(11:00pm – 3:30am Indochina Time)
(12:00am – 4:30am China Standard & Central Indonesian Time)

TIME	ACTIVITY	SPEAKER(s)
12:00-12:05	Host introduction	
12:05-12:35	RESCUE, REHABILITATE AND RELEASE: THE TALES OF SUN BEAR REINTRODUCTIONS IN SABAH, MALAYSIA BORNEO	Siew Te Wong Bornean Sun Bear Conservation Centre
12:35-12:40	Questions	
12:40-12:55	ENRICHMENT-BASED REHABILITATION OF RESCUED BEAR CUBS: A STRATEGY FOR REDUCING STRESS AND PROMOTING NATURAL BEHAVIORS	Ruben Khachatryan Wildlife Rescue Center
12:55-1:00	Questions	
1:00-1:15	BLACK BEAR CUB REHABILITATION USING SEASONALITY AND NATURAL HISTORY CONSIDERATIONS	Rachel Duckett Kelly Wallace San Diego Humane Society's Ramona Wildlife Center
1:15-1:20	Questions	
1:20-1:40	RAISING FOR RELEASE: CHALLENGES IN ORPHAN BLACK BEAR CUB REHABILITATION	Alejandra Olvera McKenzie Stewart Wildlife Center of Virginia
1:40-1:45	Questions	
1:45-2:05	THE ARCTUROS REHABILITATION AND REINTRODUCTION PROGRAMME FOR ORPHANED BROWN BEARS	Alexandros Karamanlidis ARCTUROS
2:05-2:10	Questions	
2:10-2:20	Break	
2:20-2:35	PERMANENT OR TEMPORARY HOUSING OF BLACK BEARS IN HUMAN CARE: ARE THE NEEDS THAT DIFFERENT?	Lauren Hinson Brevard Zoo
2:35-2:40	Questions	
2:40-3:00	AMERICAN BLACK BEAR CUB REHABILITATION AND RELEASE: JURISDICTIONAL PRACTICES ACROSS NORTH AMERICA	Andrea Morehouse Winisk Research and Consulting
3:00-3:05	Questions	
3:05-3:25	INSIGHTS ON FEMALE BLACK BEARS HELD IN TEMPORARY CAPTIVITY FOR RESEARCH AND CUB FOSTERING	Marcella Kelly Virginia Tech
3:25-3:30	Questions	
3:30-3:50	UNBEARABLE OR BEARABLE CAPTIVITY? EXPERIENCES AND PERSPECTIVES WITH WILD BEARS ENTERING LIFETIME KEEPING	Bernd Nonnenmacher Foundation for Bears
3:50-3:55	Questions	
3:55-4:15	DECISION MAKING FOR THE PLACEMENT OF WILD RESCUED BEARS	Angela Gibson Oakland Zoo / Bear Care Group
4:15-4:20	Questions	
4:20-4:30	End of day 1 wrap up	

ABC VIRTUAL CONFERENCE 29 MAY 2025

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12:00-12:05	Host introduction	
12:05-12:35	CHALLENGES AND SOLUTIONS WHEN ACCLIMATING 101 RESCUED BEARS TO LIFE AT A SANCTUARY IN CHINA	Molly Feldman Animals Asia China Bear Rescue Centre
12:35-12:40	Questions	
12:40-12:55	RUNNING A SUCCESSFUL PHYSIOTHERAPY PROGRAM WITH BEARS: OUTCOME-BASED HUSBANDRY FOR RESCUED BEARS	Pia Dodd Animals Asia Vietnam Bear Rescue Centre
12:55-1:00	Questions	
1:00-1:15	FEMORAL HEAD OSTECTOMY RECOVERY FOR AN AMERICAN BLACK BEAR	Jenna McMichael Houston Zoo
1:15-1:20	Questions	
1:20-1:40	JUST STAY UNDER THE HOT WIRE	Sam Lavin The Alaska Zoo
1:40-1:45	Questions	
1:45-1:55	Break	
1:55-2:10	HUSBANDRY STRATEGIES AND HABITAT MODIFICATIONS FOR REHOMING ORPHANED BLACK BEARS AT THE WILDLIFE SAFARI PARK	Katie Terrazas Wildlife Safari Park
2:10-2:15	Questions	
2:15-2:30	“SOLVING SEELEY”: A DIVE INTO PROBLEM SOLVING STEREOTYPIC BEHAVIORS	Sierra Spears Grizzly & Wolf Discovery Center
2:30-2:35	Questions	
2:35-2:50	UPDATED CASE STUDY: NORTH AMERICAN BLACK BEAR OLIVE	Nichole Lemcke Folsom City Zoo Sanctuary
2:50-2:55	Questions	
2:55-3:00	Break	
3:00-4:15	**Panel Discussion**	**Panel**
	PLACEMENT CHALLENGES FOR WILD RESCUED BEARS	Angela Gibson, Oakland Zoo / Bear Care Group Marcella Kelly, Virginia Tech Sam Lavin, The Alaska Zoo Nichole Lemcke, Folsom City Zoo Sanctuary Andrea Morehouse, Winisk Research and Consulting Bernd Nonnemacher, Foundation for Bears Alex Olvera, Wildlife Center of Virginia Agnieszka Sergiel, Polish Academy of Sciences / Bear Care Group McKenzie Stewart, Wildlife Center of Virginia
4:15-4:30	End of day 2 wrap up	

Abstracts (in order of appearance)

RESCUE, REHABILITATE AND RELEASE: THE TALES OF SUN BEAR REINTRODUCTIONS IN SABAH, MALAYSIA BORNEO

SIEW TE WONG

The Bornean Sun Bear Conservation Centre (BSBCC) was established in 2008 in Sabah, Malaysian Borneo, to conserve sun bears through holistic and pragmatic approaches, including the rehabilitation of formerly captive or rescued sun bears. To date, 70 wild-born sun bears—victims of poaching and the pet trade—have been rescued by the Sabah Wildlife Department and sent to BSBCC for rehabilitation and long-term care. A total of 13 sun bears have been successfully rehabilitated and reintroduced into the wild. Two additional sun bear cubs are currently undergoing a soft-release program. The rehabilitation process begins with bonding with sun bear cubs and taking them on walks in the forest until they reach one year of age. After that, juvenile cubs are raised in BSBCC's natural forest enclosure within the primary forest of the Kabili-Sepilok Forest Reserve, Sandakan, Sabah, until they are four years old. Potential release candidates are chosen based on their survival skills and ability to avoid human interaction. Each released bear is fitted with a satellite collar and monitored for 1–3 months until the signals cease. The home range of these bears ranges between 6.5 km^2 and 202.4 km^2 (95% Kernel Density Estimation, KDE). The weekly distance traveled by released bears varies from 960 m to 22,738 m. Two released bears were found dead within a month of release, while the fate of the other eight remains unknown. Outcomes from this study indicate that rehabilitated sun bears face significant survival and monitoring challenges. In February 2024, BSBCC initiated a soft-release program as a second method to rehabilitate rescued sun bear cubs. Cubs are brought to a rehabilitation camp at Tabin Wildlife Reserve, where a field crew accompanies them on daily walks until they reach adulthood and leave their caretakers based on the bears' own readiness. The findings of this study provide valuable implications for future sun bear rehabilitation projects. Given that rehabilitation efforts face multiple challenges and difficulties, greater efforts should focus on combating poaching and illegal pet trade to ensure sun bears' survival in the wild.

ENRICHMENT-BASED REHABILITATION OF RESCUED BEAR CUBS: A STRATEGY FOR REDUCING STRESS AND PROMOTING NATURAL BEHAVIORS

RUBEN KHACHATRYAN*, NARINE PILOYAN, ANTONINA TIMOFEEVA, TSOVINAR HOVHANNISYAN

We studied behavioral pattern changes in brown bear cubs over the course of one year at the Wildlife Rescue Center in Armenia. The study suggests that different types of enrichment—food, environmental modifications, toys, and scent-based stimulation—can effectively reduce stress and decrease stereotypic behaviors in rescued cubs from the wild. Furthermore, this research represents the first documented approach demonstrating that enrichment provision can help sustain natural behaviors essential for the successful reintroduction of bears into the wild. Two cubs, rescued from the Vayots Dzor region in southern Armenia three months apart, were housed in a shared enclosure spanning 270 m2. The enclosure was designed to be divided into two to three sections, allowing for efficient enrichment, feeding, water access, enclosure maintenance, and other necessary interventions. A key aspect of their rehabilitation involved frequent environmental enrichment using natural materials, along with varied food provision strategies to support hibernation preparation and encourage natural hunting behaviors through live prey provision. Additionally, intensive monitoring via online surveillance cameras enabled the scientific team to stimulate the cubs' nocturnal activity by adjusting feeding times and prey provision from dusk to dawn. The data gathered from the online cameras was retrieved, covering 120 monitoring days, of which approximately ±40 days were analyzed. The team closely observed and recorded the cubs' behavior, categorizing their active time into playing, foraging, and swimming, as well as documenting their passive time and periods of stereotypic behavior. Over a three-month period, the cubs' space was systematically expanded, leading to increased activity levels and a reduction in stereotypical behaviors. Four months of online monitoring data further confirmed a positive correlation between enrichment efforts and reduced stress-related behaviors, underscoring the importance of tailored rehabilitation strategies for bear cubs before their release into the wild.

This project underscores the importance of science-based rehabilitation and release strategies in bear conservation, demonstrating how targeted interventions can enhance the well-being and survival prospects of rehabilitated cubs.

BLACK BEAR CUB REHABILITATION USING SEASONALITY AND NATURAL HISTORY CONSIDERATIONS

RACHEL DUCKETT, KELLY WALLACE

In this presentation, we will cover the challenges and evolving management in the rehabilitation of orphaned and injured California black bear cubs at San Diego Humane Society's Ramona Wildlife Center. Being one of four facilities licensed to rehabilitate black bears in California, we receive orphaned, injured, and human-conflict bears from all over the state. Rehabilitating highly intelligent apex predators comes with several obstacles. Depending on when they arrive, cubs can stay at our center for up to 10 months. Staff work to prevent habituation by restricting human contact, wearing disguises, scent masking, and creating visual barriers around habitats. Seasonal and behavioral based enrichment experiences are provided to teach orphaned cubs how to forage and interact with conspecifics when released into the wild. We will discuss how the Ramona Wildlife Center has made husbandry changes within the last four years to ensure the successful release and hopeful increase in survival rates of their patients. Some of these changes include natural history-focused diets, enrichment, seasonality, behavioral observations, enclosure modifications, and working closely with partners such as the California Department of Fish and Wildlife (CDFW), other rehabilitation centers, Association for Zoos and Aquariums (AZA) facilities and the Bear Care Group.

RAISING FOR RELEASE: CHALLENGES IN ORPHAN BLACK BEAR CUB REHABILITATION

ALEJANDRA OLVERA, MCKENZIE STEWART

American black bear cubs rehabilitated at The Wildlife Center of Virginia (WCV) are kept for 12 months until their release the following spring. Long term captivity under human care poses risks of habituation, failure to thrive, and other concerns, all of which can jeopardize their release if too severe. Mitigating this risk requires careful balance of the cubs' physical, behavioral, and psychological needs. This presentation explores obstacles encountered during the rehabilitation process, emphasizing the implementation of an outcome-based husbandry program designed to enhance welfare and encourage natural behaviors. Challenges include maintaining a seasonal diet that will be similar to that of the bears' release area and encouraging seasonal feeding trends. The bear care team at WCV also balances the need for proper social development by tailoring husbandry practices to match developmental milestones black bear cubs experience in the wild.

THE ARCTUROS REHABILITATION AND REINTRODUCTION PROGRAMME FOR ORPHANED BROWN BEARS

ALEXANDROS A. KARAMANLIDIS*, GLYKA DEDEOGLOU, MIGUEL DE GABRIEL HERNANDO, HAROULA KROMIADOU, ZOE SKALKOS, KONSTANTINOS STEFANIDIS, PANOS STEFANOU

The practice of raising orphaned wildlife in captive-rearing facilities for release back to the wild is expanding globally and has been performed with orphaned birds, marine mammals and primates. For more than 30 years bear conservationists and managers around the world have been experimenting with the rehabilitation and release of bears; in North America the rehabilitation of American black bears (*Ursus americanus*) and brown bears (*Ursus arctos*) has proven to be a very effective and valuable conservation tool. By contrast, in the highly anthropogenic landscapes of Europe, where several small and endangered bear populations still exist, there has been little experience with bear rehabilitation. In this study we provide a preliminary evaluation of a unique program that was initiated in 2011 to rehabilitate and release back to the wild orphaned bears in Greece. The ARCTUROS rehabilitation and reintroduction programme for orphaned brown bears has so far treated 10 cubs from Greece. In 2018 the project expanded to include cubs from neighbouring Bulgaria with nine animals being treated so far. We provide an overview of the basic elements of the rehabilitation program (i.e., logistics, facilities, personnel, feeding regime, veterinary monitoring) and of the post-release monitoring (i.e., home range, daily

movements). We also discuss opportunities for environmental education, public awareness, fund-raising, and the overall importance of hand-rearing orphaned bear cubs and releasing them back to the wild for the conservation of the species.

PERMANENT OR TEMPORARY HOUSING OF BLACK BEARS IN HUMAN CARE: ARE THE NEEDS THAT DIFFERENT?

LAUREN HINSON

Black bears live freely in nearly every state within the United States. Whether housing black bears temporarily for release or permanently due to a non-releasable status, all black bears have the same basic physical, behavioral, and biological needs. Being under human care does not necessarily change these basic needs, and as caregivers we must listen to the needs of the bears and create an environment that mimics their natural habitat and behavioral opportunities. Bears need to forage, dig, climb trees, swim, and perform many other natural behaviors. Bears also need to experience seasonal changes while under human care, which are an important part of a black bear's life cycle; this includes hibernation, walking hibernation, normal activity, hyperphagia, and Fall transition. Bears' bodies are hardwired to go through these stages in various capacities dependent on location and gender, and being under human care does not change that. Providing these opportunities is vital for a bear's wellbeing whether they are set for release back into their native range or will be assuming a permanent residence at an animal care facility. This presentation will discuss ways to provide black bears with the resources they need under human care to exhibit natural behaviors and engage in natural biological processes such as allowing them to feed heavily in Fall, providing them with naturalistic food items, tapering food moving into winter, providing denning opportunities that allow for privacy, and then slowly transitioning food back into the routine as Spring and Summer arrive. Differing diet requirements and weight fluctuations across seasons will be discussed along with what staff should expect during the hibernation period. Challenges and solutions to providing a natural environment and behavioral routine for black bears under human care will be reviewed along with the consequences of not providing these such as unwanted behaviors and physical health issues.

AMERICAN BLACK BEAR CUB REHABILITATION AND RELEASE: JURISDICTIONAL PRACTICES ACROSS NORTH AMERICA

ANDREA MOREHOUSE*, MARK MALLORY, ANDREW DEROCHER, MARK EDWARDS, TRICIA FLEMING, MARTYN OBBARD

Rehabilitation and release back to the wild of orphaned American black bear (*Ursus americanus*) cubs is a wildlife management option used across North America. We reviewed the literature and surveyed wildlife managers and biologists within North America from August 2022 through March 2023 to gather information on their policies and practices regarding rehabilitation and release of orphaned black bear cubs. We define cubs as bears <1 year old but note that most releases happen when the animals are yearlings, typically 12–18 months of age. The literature suggests that when rehabilitation follows science-based protocols, it is a feasible management option, and rehabilitated cubs may survive at rates similar to those of their wild counterparts, die of similar causes, and generally have low rates of conflicts with humans. Repeatedly mentioned within both the literature and survey results was the importance of minimizing human contact and selecting appropriate release sites that consider habitat, food availability, proximity to humans, and the age structure, genetics, and density of black bears in the release area. We received 99 responses from 63 different jurisdictions. Rehabilitation of orphaned black bear cubs was allowed in 72.5% of surveyed jurisdictions with a breeding black bear population. In 82.3% of jurisdictions, a government agency was responsible for selecting release sites. The most common causes identified by our survey for cubs being orphaned were vehicle collisions (50 of 63 responses) and removal of mothers because of conflict behavior (35 of 63 responses). Almost all (96.9%) jurisdictions required rehabilitation centers to be licensed. On average, over the past 5 years (2018–2022), most (70.8%) jurisdictions rehabilitated <25 orphaned cubs. Lack of reliable and suitable rehabilitation centers following strict, science-based protocols was a frequently mentioned challenge, as was managing public perceptions and expectations. Despite these challenges, most (61%) survey respondents said rehabilitation of orphaned black bear cubs was either somewhat or very successful.

INSIGHTS ON FEMALE BLACK BEARS HELD IN TEMPORARY CAPTIVITY FOR RESEARCH AND CUB FOSTERING

MARCELLA KELLY

In 1988 the Black Bear Research Center (BBRC) held the first cohort of female bears. Under the direction of Dr. Michael Vaughan, the BBRC held 111 bears, mostly females, until 2009 when he retired. From 2012 to 2016, under the direction of Dr. Marcella Kelly who previously assisted Dr. Vaughan, the BBRC held an additional 18 bears for a total of 130 bears temporarily housed at the facility from fall until spring. In addition, 155 cubs were born at the BBRC to 62 females, 54 orphan cubs were fostered, and we collected and compiled morphological measurements, anesthetic information, as well as over 3,000 serum and plasma samples. Numerous graduate students conducted research on a variety of topics including pseudopregnancy, cub growth, maternal effects, cub fostering, drivers of hibernation, muscle and bone metabolism, and more. Bears were fed a diet of commercial, high-protein dog food and water *ad libitum*. Nearly all bears acclimatized quickly to the captive setting and underwent normal hibernation. The few that did not were released early back to the wild setting. Adult bears were immobilized every ~10 days to collect weights and measurements and cubs were transported temporarily to a climate-controlled room for observations and measurements. Most bears at the BBRC had either twins or triplets, while single cubs were less common. In only two instances did cubs not survive, including a case of a very late birth date, and another case of cannibalism. Most foster cubs were readily accepted by the mother, except in a few instances of late fostering (mid-late April) when mothers rejected a cub. Cubs did not display any more aggression towards foster cubs than to their biological siblings and mothers spent similar amounts of time with both cub-types. Bear families were released in April/May and appeared to have high survival rates. Hibernation in captivity was to be driven by a combination of photoperiod and temperature, with temperature being a particularly strong driver of onset of hibernation in late fall, post hyperphagia. Black bears appeared to tolerate captivity and display similar hibernation and activity patterns as wild bears.

UNBEARABLE OR BEARABLE CAPTIVITY? EXPERIENCES AND PERSPECTIVES WITH WILD BEARS ENTERING LIFETIME KEEPING

BERND NONNENMACHER

This presentation will address the timely issue of wild ‘problem bears’ coming into captivity. The focus will be on the recent cases involving Italian authorities forcing the placement of ‘problem bears’ at sanctuaries. This solution has been exercised previously, as well as under public pressure. The Foundation for Bears runs two sanctuaries in Germany: 1) Alternative Bear Park Worbis (established in 1996) and 2) Alternative Wolf and Bear Park Black Forest (established in 2010). These facilities are the forever home for two wild bears from Trentino, Italy. Another enclosure is being prepared to keep a third, wild female bear from this region. The speaker will share his experience with the two wild bears now living in the sanctuary. After several years, the bears‘ motivation to escape remains strong with numerous attempts to dig large amounts of substrate under the fencing or to use branches to disarm electrical fencing. The aim is to discuss the demanding placement of such bears in captivity from the animal welfare point of view, but also keeping conditions, costs involved, and public outreach.

DECISION MAKING FOR THE PLACEMENT OF WILD RESCUED BEARS

ANGELA GIBSON

Bears may come into human care due to conflicts with humans, habituation to human environments, or due to trauma from various causes. Understanding the circumstances that led to their captivity along with their current physical, psychological, and emotional condition are important in order to inform the decisions around their short or long care, their expected outcome and placement needs. This presentation will discuss a placement document created by the Bear Care Group to aid in the decision-making processes necessary to help ensure that the best interests of individual bears are served along with the broader needs of population management.

CHALLENGES AND SOLUTIONS WHEN ACCLIMATING 101 RESCUED BEARS TO LIFE AT A SANCTUARY IN CHINA

MOLLY FELDMAN

The China Bear Rescue Centre (CBRC) currently houses 98 bears (96 Asiatic black bears and 2 Tibetan brown bears). The vast majority come from the bile-farming industry, having either been born in captivity or taken from the wild at a young age. From April to June 2021,101 bears were relocated from a former bile extraction and breeding farm in the south of China to Animals Asia's sanctuary in Chengdu. While the logistics of moving such a huge quantity of bears were tricky, the real challenge was getting the bears settled into their new lives at CBRC.

Acclimating rescued bears to new environments can be a difficult process, whether they come from other captive situations or the wild. Central to this is the barrage of novel sights, sounds, smells and experiences, all of which can be frightening and stressful. Knowing a bear's history can be helpful in understanding their behavioural responses, though this is often not possible. In our case, we had the rare situation of having cared for the bears at the farm for eight years prior to their relocation. However, even this was not enough to overcome the multitude of challenges inherent to the rescue and rehoming process.

While the experience of relocating 101 bears may not be typical, there were valuable lessons to be learned that could be useful to any facility caring for a rescued bear either permanently or temporarily. This presentation will discuss some of the more common behavioural challenges we've seen including reluctance to explore and other deficiencies in behavioural repertoire, eating non-food items (and implications for enrichment), food anxiety, difficulty with social interactions and frequent displays of abnormal, repetitive behaviours. Attempts to overcome these issues will be addressed including the importance of considering how negative emotions can impact the bears' perception of their situation and how this relates to the success of husbandry, enrichment and behaviour modification programmes.

RUNNING A SUCCESSFUL PHYSIOTHERAPY PROGRAM WITH BEARS: OUTCOME-BASED HUSBANDRY FOR RESCUED BEARS

PIA DODD

Rescued bears are sometimes permanently placed under human care because they are deemed unable to be released for a variety of reasons. Often, these reasons involve health conditions. At Animals Asia's Vietnam Bear Rescue Centre (VBRC), we receive rescued bears from the bile farming industry. One of the common conditions these bears arrive with is arthritis or missing limbs. As they age their mobility can become more compromised as their arthritis progresses, causing pain and limiting their ability to move around their enclosures.

Physiotherapy is a tool that Animals Asia has utilised to help bears build muscle and relieve pain by using a series of individualized equipment in their dens. At VBRC we have developed a program, with help from a specialist, that allows us to currently have 23 bears on physiotherapy, with all of the other bears in our sanctuary rotating through a physiotherapy den at least once a year to assess their mobility. Physiotherapy in wildlife has its limitations due to safety aspects of handling wild animals. We have developed a creative setup, utilising den design and cooperative care to ensure the program is successful. Each den is set up with the bear's individual needs in mind to allow them to safely engage in customised physiotherapy activities. Each session is monitored by the bear care team, and the veterinary team observes each bear once a month to ensure that their physiotherapy program is safe and the bears are using their muscles as prescribed. With creativity, this form of therapy can be used in a variety of settings for bears who live under permanent human care.

FEMORAL HEAD OSTECTOMY RECOVERY FOR AN AMERICAN BLACK BEAR

JENNA MCMICHAEL

In September 2022, Claud, a rescued male American black bear was donated to the Houston Zoo from the Nevada Department of Wildlife. Upon arrival Claud presented with a limp to his right hind leg that initially appeared to resolve on its own. In August 2023, Claud's limp returned; he was immobilized and diagnosed with

hip dysplasia during the exam. Based on the radiographs, the injury was consistent with a previous trauma of unknown origin. In December 2023, a femoral head ostectomy (FHO) was performed by a visiting specialist from Gulf Coast Veterinary Hospital. Claud was trained using positive reinforcement techniques to voluntarily participate in several medical behaviors prior to his surgery including voluntary injection and a side present behavior so he would be able to receive injections and cold-laser therapy with minimal stress. Claud voluntarily participated in his medical treatment as well as physical therapy stretches during his recovery from surgery. In September 2024, Claud was considered fully recovered from his procedure and his medical case was resolved. In October 2024, we physically introduced Claud to our resident female black bear. The introductions were closely monitored, and no further medical concerns were observed confirming the success of Claud's procedure and subsequent rehabilitation. This case highlights the ability to train wild rescue bears to participate in their own medical care in order to assist with their treatment and recovery from physical injuries and other health issues.

JUST STAY UNDER THE HOT WIRE

SAM LAVIN

For the last 50+ years, the Alaska Zoo has provided temporary and permanent housing and care to over 100 cubs from all three bear species that call Alaska home. While animal care practices have changed a lot during that time, the goal has not: provide a home for orphaned cubs in need and send them out healthy and ready to live out their life in a facility as an ambassador for their species. We'll discuss how we accomplish this task, face challenges, learn and improve, while running an entire zoo.

HUSBANDRY STRATEGIES AND HABITAT MODIFCATIONS FOR REHOMING ORPHANED BLACK BEARS AT THE WLDLIFE SAFARI PARK

KATIE TERRAZAS

Following the passing of one of our two adult female black bears in 2023, we were presented with the opportunity to rehome two orphaned six-month-old male black bears by the Alaska Department of Fish and Game. Prior to their arrival, and while in quarantine, modifications were made to the existing habitat to meet the specific needs of these young bears and to facilitate introductions between them and our resident 24-year-old female black bear. This presentation details a 90-day quarantine period for medical assessment and staff bonding, as well as significant habitat modifications made including dig barriers and climbing deterrents to ensure the safety and well-being of the new arrivals. It will also describe the construction of specialized areas designed to facilitate introductions and training. The presentation will highlight the strategies employed for desensitization, medical behavior training, and the phased introduction process, including scent swaps and pen rotations. Lastly, this presentation will explain how we facilitated the bear's preparation for torpor, and plans underway aiming for successful integration with our existing female black bear.

"SOLVING SEELEY": A DIVE INTO PROBLEM SOLVING STEREOTYPIC BEHAVIORS

SIERRA SPEARS

Grizzly bears exhibiting food conditioned behaviors are assessed by multiple agencies when removed from the wild to decide if they may be a good fit for placement under human care. Young individuals are generally considered the best candidates for placement based on their resiliency and adaptability at that young age. This presentation will take a closer look at Seeley, a six-year-old grizzly bear, who came to Grizzly and Wolf Discovery Center after she was removed from the wild at approximately one year of age. She developed a unique jumping and head swinging stereotypic behavior a few months after her arrival due to attempts to resolve ongoing medical issues at a young age and we took various steps to mitigate the behavior in her adult life. Data was collected by staff in order to better understand Seeley's day-to-day behavior and inform changes to implement, as well as provide justification for these changes to upper management. Once a baseline was established and changes were implemented, we were able to reassess her behavior and continue to implement further changes based on when and how often her stereotypic behavior appeared. As a result, we observed a significant decrease in Seeley's stereotypic behavior during the times in which it had previously been most prevalent. Data

collection remains ongoing and our team continues to make necessary changes based on current information. Working with daily input from care staff created significant buy-in that allowed us to positively affect Seeley's stereotypic behavior and in turn, directly improve her welfare. This presentation will discuss the data we collected, the welfare improvements we made based on this data, and challenges we experienced along the way.

UPDATED CASE STUDY: NORTH AMERICAN BLACK BEAR OLIVE

NICHOLE LEMCKE*, JOCELYN SMELTZER

North American Black Bear "Olive" had to adjust to life under human care at the Folsom City Zoo Sanctuary post surrender to the California Department of Fish and Wildlife from a private home. Her case was first introduced at the Advancing Bear Care Conference in 2024 where we discussed her unique challenges, medical history and issues with exhibiting undesirable behaviors such as pacing, leading to concerns about her overall welfare. Strategies previously employed to improve her welfare included increased enrichment, continuous off-exhibit access, a selective serotonin reuptake inhibitor (Paroxetine), ruling out pain using non-steroidal anti-inflammatories (NSAIDs), and rotating exhibit access, however these strategies resulted in minimal improvement. Previous behavioral data collected demonstrated a statistically significant correlation between visual access to neighboring black bear "Henry" and Olive's pacing.

Olive's welfare is now significantly improved due to changes implemented after the conference. Two major strategies were used to improve her welfare: introducing another bear for companionship and allowing torpor to occur naturally. The lack of social contact at a young age and Olive's interest in the neighboring bear led to our decision to introduce the bears resulting in a near elimination of stereotypical behaviors and the discontinuation of Paroxetine. To further the welfare of both bears, torpor was supported for the first time. Information will be presented about the strategies used to introduce two bears of very different size and age as well as the exhibit challenges associated with allowing bears to go into torpor. Wild bears like Olive who are brought into human care can experience positive welfare outcomes once "the missing pieces" are identified. Collaboration through avenues such as the Bear Care Group's conferences can provide the tools to significantly change welfare for bears like Olive.

PANEL DISCUSSION: PLACEMENT CHALLENGES FOR WILD RESCUED BEARS

ANGELA GIBSON, MARCELLA KELLY, SAM LAVIN, NICHOLE LEMCKE, ANDREA MOREHOUSE, BERND NONNEMACHER, ALEX OLVERA, AGNIESZKA SERGIEL, MCKENZIE STEWART

Bears may come into human care due to conflicts with humans, habituation to human environments, or due to trauma from various causes. Understanding the circumstances that led to their captivity and the local regulations governing allowable responses, along with the bears' current physical, psychological, and emotional condition are important in order to inform decisions around their short or long-term care, their expected outcome and placement needs.

This panel brings together professionals from various parts of the field (research, rehab, zoo, and sanctuary) to discuss placement challenges as well as the multifaceted, decision-making processes necessary to help ensure that the best interests of individual bears are served.

Biographies (alphabetized by last name)

PIA DODD

Pia is a veterinary nurse at Animals Asia's Vietnam Bear Rescue Centre. Animals Asia works to end the bear bile trade in Vietnam and China. Pia works within the veterinary team and leads the physiotherapy program at the Vietnam sanctuary using her love for rehabilitation and pain management to fuel this project. She has also created an acute pain scale for use in bears and is heavily involved in bear cooperative care for medical husbandry. Pia has a wide range of experience throughout the United Kingdom, Sri Lanka and Vietnam, and was involved in the running of physiotherapy programs for rescued dogs in Sri Lanka.

Animals Asia Vietnam Bear Rescue Centre

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RACHEL DUCKETT

Rachel is a Senior Wildlife Rehabilitation Specialist at San Diego Humane Society's Project Wildlife in Ramona, California. She has a degree in veterinary technology medicine and has six years of wildlife rehabilitation experience. Rachel specializes in rehabilitating native California predator species, with a focus on neonate mammals and orphaned black bears. Taking the lead on the Bear Team, she has used natural history and behavioral research to improve husbandry practices and habitat for black bears in rehabilitative care. This has led to the successful rehabilitation and release of 11 orphaned black bear cubs since 2021. Her goals include continuing advancements in wildlife rehabilitative care by using more natural history and behavioral-based practices and public education for coexistence with human conflict species.

San Diego Humane Society's Ramona Wildlife Center

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MOLLY FELDMAN

Molly is the Senior Bear Team Manager at the Chengdu Bear Rescue Centre in China. She has worked for Animals Asia since July 2016 and is currently responsible for the care of 96 bears and a team of over 50 caregivers. She has an MSc in Applied Animal Behaviour and Animal Welfare from the University of Edinburgh, as well as a professional background in animal husbandry, rehabilitation and behavioural research. Molly is also a MHERA licensed practitioner and has recently begun a PhD investigating psychological issues in bears with an emphasis on identifying and managing trauma.

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ANGELA GIBSON

Angela, Zoological Manager for California Trail at the Oakland Zoo, holds a B.S. and M.S. in Biology. Specializing in North American species, she focuses on bear welfare, elevating husbandry standards through seasonal life strategy integration. Passionate about teaching those directly caring for wildlife, Angela serves on the Bear Care

Group's Board of Directors, emphasizing behavior-based and holistic husbandry practices. Her commitment extends to the Association of Zoos & Aquariums (AZA) Bear Taxon Advisory Group and involvement in the AZA Jaguar and Bison SAFE (Saving Animals From Extinction) Programs.

Oakland Zoo / Bear Care Group Board of Directors

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LAUREN HINSON

Lauren is the Director of Animal Programs at Brevard Zoo with a Master's degree in animal behavior and conservation. Throughout her ten years at Brevard Zoo, she has had the opportunity to collaborate with Florida's Fish and Wildlife agency (FWC) to provide permanent homes for three orphaned non-releasable black bear cubs. Two cubs were small and needed to be hand reared. The third cub, labeled a "nuisance" bear after being fed by locals, was scheduled for euthanasia but upon completion of a new bear habitat was able to have a permanent home. With the support of her zoo, Lauren created a bear rehabilitation program committed to working with FWC to provide temporary housing and medical care to orphaned and injured bear cubs. As of 2024 they have successfully released twelve bears into their native ranges throughout Florida. A larger rehabilitation center for orphaned and injured bear cubs is currently under construction at Brevard Zoo and will be completed in early 2025. This will allow them to offer a more natural habitat space and the ability to accept more orphaned bear cubs.

Brevard Zoo

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ALEXANDROS KARAMANLIDIS

Dr. Karamanlidis is a conservation biologist involved in the study and rehabilitation / reintroduction of Mediterranean monk seals, large carnivores and ungulates. He is a member of various IUCN Specialist Groups, an adjunct researcher with the Norwegian University of Life Sciences and is on the Editorial Board of "Endangered Species Research". He is the recipient of the 2017 "Conservation Merit" prize of the Society for Marine Mammalogy, a National Geographic Explorer and the Director of the NGO ARCTUROS. ARCTUROS is a Greek, non-governmental organization seeking to enhance biodiversity and sustainability in the rural areas of Greece. ARCTUROS implements cross-border projects in order to protect mountainous ecosystems, with an emphasis on bears and large mammals, aiming at the integrated management of protected mountainous regions and the provision of expertise for natural environment interventions.

ARCTUROS - Civil Society for the Protection and Management of Wildlife and the Natural Environment

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MARCELLA KELLY

Dr. Marcella Kelly is a professor in the Department of Fish and Wildlife Conservation at Virginia Tech. She has studied numerous carnivore species including the American black bear in both wild and captive settings. From 2012 to 2016 she was the Director of the Black Bear Research Center, where black bears were held in temporary captivity from fall, through hibernation, until their release back into the wild in spring. She has directed multiple research projects on captive bears held at the BBRC.

Virginia Tech

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RUBEN KHACHATRYAN

Ruben, Founder and Director of the Foundation for the Preservation of Wildlife and Cultural Assets (FPWC) since 2002, has been a leading force in conservation efforts across Armenia and the Caucasus. From 2011 to 2019, he served as Director of Yerevan Zoo, implementing significant transformations and improvements. As a member of the IUCN SSC Bear Specialist Group and Vice Coordinator for the EAZA EEP Brown Bear Program, Ruben played a key role in establishing Armenia's first Wildlife Rescue Center for brown bears in collaboration with International Animal Rescue (IAR). He also leads the Great Bear Rescue campaign, dedicated to rescuing and rehabilitating mistreated and orphaned bears. Through initiatives, numerous bears have been rescued from inhumane conditions in private collections, gas stations, and restaurants, giving them a chance to recover in a natural environment.

Wildlife Rescue Center

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SAMANTHA (SAM) LAVIN

Sam was born and raised in Alaska and has been working with wildlife for 15 years, starting with rehab in Montana. Currently, she is working as the curator at the Alaska Zoo, working closely with the State of Alaska to rehome orphaned and injured wildlife. She loves every animal, but porcupines and brown bears are easy favorites.

The Alaska Zoo

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NICHOLE LEMCKE

Nicole has worked with non-releasable native wildlife, including North American Black Bears, for over a decade. She began her career as an intern in the Department of Animal Health at Disney's Animal Kingdom and worked at the Orange County Zoo in Southern California. Nichole is currently the Zoo Supervisor overseeing animal care at the Folsom City Zoo Sanctuary where she has been for the last five years. She is a lover of records and data and holds a Master of Library and Information Science degree from San Jose State University.

Folsom City Zoo Sanctuary

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JENNA MCMICHAEL

Jenna has been a zookeeper for fifteen years. She has a wide array of taxa experience, with eight years working with brown and black bears. Jenna has led endeavors to train American black bears using positive reinforcement methods for voluntary participation in medical procedures including injections, blood draws and cold laser therapy.

Houston Zoo

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ANDREA MOREHOUSE

Andrea is an independent scientist who works on various conservation and management issues related to large carnivores in multi-use landscapes. She moved to Alberta in 2007 and completed both an M.Sc. and Ph.D. in ecology at the University of Alberta. Through her research, she strives to effectively engage scientists, managers, and community members to develop and implement scientifically sound and socially workable wildlife conservation and management strategies. She works with the Waterton Biosphere Region as the Science Lead of their Carnivores and Communities Program. She is a 2017 Wilburforce Fellow in Conservation Science; serves on the Nature Conservancy of Canada's Alberta Conservation Advisory Committee, and the IUCN Bear Specialist Group's North American Bear Expert Team; is a past president of the Alberta Chapter of The Wildlife Society; and is active in other professional societies. She lives in the Pincher Creek area with her husband, three boys, and dog.

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BERND NONNENMACHER

Bernd has been working with bears, wolves and lynx for over 10 years. As managing director of the Foundation for Bears, he is responsible for two animal welfare projects in Germany with over 40 hectares of forest for 18 bears, 7 wolves and 5 lynx. Over the past few years, Bernd Nonnenmacher with his organisation was able to rescue 16 bears, 16 wolves and 6 lynxes from poor keeping conditions and provide them with a new life in the animal protection projects in Worbis and in the Black Forest.

Foundation for Bears

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ALEJANDRA OLVERA

Alex is the Wildlife Rehabilitation Supervisor at the esteemed Wildlife Center of Virginia (WCV), where she plays a pivotal role in the rehabilitation and care of over 4,000 injured, orphaned, and distressed wildlife, including American Black bear cubs and yearlings. WCV is an internationally recognized teaching hospital for wildlife medicine and clinical research. Alex has enhanced and brought innovation to the centers' animal care protocols using her practical experience obtained from over a decade in wildlife conservation and zoological medicine. Alex will continue to be a driving force in the field of wildlife rehabilitation, hoping to inspire others to join the effort to protect these magnificent animals for generations to come.

The Wildlife Center of Virginia

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SIERRA SPEARS

Sierra grew up in Wyoming and was drawn to bears after experiencing firsthand the effects of human-bear conflict on local communities. Continuing to live in bear country, Sierra is the current Animal Curator at the

Grizzly & Wolf Discovery Center located in West Yellowstone, Montana. Sierra earned her Associates of Science degree in Zoo Animal Technology from the Santa Fe College Teaching Zoo in 2020 and has worked with a variety of taxa, ultimately working directly with bears. Sierra has worked primarily with grizzly bears, but has also had opportunities to work in the field with American black bears collecting samples for hair snare studies and with Wildlife SOS in India through the AZA Sloth Bear SAFE program working hands-on with sanctuary staff and advising on animal training best-practices.

Grizzly & Wolf Discovery Center

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MCKENZIE (MAC) STEWART

Mac is the team lead of the wildlife rehabilitation team at the Wildlife Center of Virginia. She has a background in wildlife ecology and conservation, spending time doing field research, veterinary technology, and is a Certified Wildlife Rehabilitator through the International Wildlife Rehabilitation Council (IWRC). Mac has worked with a variety of native species found across the southeastern United States and has grown to love living in Virginia. She shares her passion of rehabilitating native species including black bear cubs with the rest of her team. Mac is one of only four rehabilitators permitted to work with black bears in the state of Virginia and has helped raise over 25 cubs during her time at the WCV.

The Wildlife Center of Virginia

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KATIE TERRAZAS

Katie is a Senior Keeper at the Wildlife Safari Park who has dedicated her career to bear ecology and welfare. While attending the 2019 Advancing Bear Care Conference in Scotland she gained valuable insights into the importance of seasonality, which she then put into practice to improve her bears' wellbeing by supporting their natural torpor behaviors. After implementing these changes, Katie shared her experience at the 2022 UK Bear Husbandry Conference and the 2023 Bear Taxon Advisory Group Husbandry Course, educating fellow professionals on the benefits of incorporating seasonality into their bears' husbandry routines.

Wildlife Safari Park

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KELLY WALLACE

Kelly Wallace is a Senior Wildlife Rehabilitation Specialist at San Diego Humane Society's Project Wildlife in Ramona, California. She has a background in holistic/rehabilitative veterinary medicine and six years of wildlife rehabilitation experience. She specializes in working with native California predator species. With an enthusiasm for rehabilitating wild canids, Kelly has led in overseeing the Coyote Team for the last three years. This has largely contributed to the successful rehabilitation, release, and reuniting of 49 coyotes back into the wild. She is also an active member of the Bear Team. Using her knowledge of native plant species and natural history, Kelly has created habitats to ensure coyotes and bears can be successful upon release. Her goals include ethically expanding the way carnivores are rehabilitated to reflect a natural history approach and to inspire and educate the general public how to coexist with wildlife in an urban environment.

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SIEW TE WONG

DR. (Hon) SIEW TE WONG, D.J.N. is a wildlife biologist and a tropical forest ecologist. He is the CEO and the Founder of the Bornean Sun Bear Conservation Centre in Sabah. He did his Diploma in Veterinary and Animal Science from National Pingtung University of Science and Technology, Pingtung, Taiwan, and all of his B. Sc., M. Sc., and doctorate majoring in Wildlife Biology at the University of Montana, Montana, USA. Dr. Wong has been awarded with numerous awards and recognitions of his works on sun bears. Among them were conferred “Member-Order of the Defender of State” (Darjah Johan Negeri, D.J.N) by the governor of Penang State, Malaysia, awarded an Honorary Doctorate from the University of Sunshine Coast, Australia, “My Country Hero” by the Government of Malaysia, and awarded as a “CNN Hero” by Cable News Network (CNN), USA.

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SPONSORS

IUCN SSC Bear Specialist Group

www.globalbearconservation.org

Mission

The Bear Specialist Group (BSG) strives to promote the conservation of bears living in their natural habitats across their worldwide distribution.

We do this by:

- Gaining, synthesizing and disseminating information;
- Aiding, promoting and supporting conservation initiatives;
- Providing technical assistance and building capacity of those involved or interested in bear conservation; and
- Becoming directly involved in issues that reduce threats and foster the conservation of any of the 7 species of terrestrial bears.

IUCN SSC Species Survival Commission Bear Specialist Group

2027

Update: postponed until 2027. The next Advancing Bear Care capacity-building workshop will take place in Japan with our partners Wild Welfare. Stay tuned for more information!

CONTACT INFORMATION

We would love to hear from you!

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Bear Care
GROUP