Captive Wildlife Sanctuaries:

Definition, Ethical Considerations and Public Perception

Catherine Doyle

Performing Animal Welfare Society

Abstract: In its truest form, the modern captive wildlife sanctuary offers a lifelong home in a more natural environment for wild animals living in captivity. Tigers, lions, elephants, bears, chimpanzees and other animals are provided relative freedom and autonomy after years spent in zoos, circuses, laboratories, or private menageries. These sanctuaries provide specialized habitats in which wild animals can express more species-specific behaviors and experience a higher quality of life. Though they share some practical issues of caretaking with other forms of captivity — as well as many ethical problems — important distinctions separate them. Research suggests that public attitudes are moving toward a more compassionate and caring view of wild animals, which may be causing more people to gravitate toward captive wildlife sanctuaries and their rescue mission. Consequently, true sanctuaries run the risk of becoming a way for people to normalize and feel better about captivity, rather than acknowledge its inherent limitations for wild animals. True sanctuaries must lead the public to question the connection between their own relationships with wild animals and the role that plays in perpetuating their captivity, with the goal of ending the systems of abuse and exploitation that have created the need for captive wildlife sanctuaries to exist.

Keywords: captive wildlife sanctuary, animal sanctuary, animal welfare, captive wild animals, exotic animals

Introduction

Many scholars consider us to be living in an era dubbed 'the Anthropocene', in which human activities are causing global environmental changes, habitat loss, and a sixth mass extinction. Biologist E.O. Wilson has predicted that the earth could lose half of its biodiversity by the year 2100 if negative human impacts are not reduced (Tobin). At the same time, there is increased concern for the welfare of wild and domesticated animals (George et al. 237). Research by Manfredo et al. suggests that American values toward wildlife are shifting away from mastery or domination and toward a 'mutualist' orientation where wildlife is seen 'as capable of relationships of trust with humans, as if wildlife were part of an extended family, and deserving of rights and care' (Teel and Manfredo 130).

In line with this trend, captive wildlife sanctuaries have increasingly come to be seen by the public as the ideal for captive wild animals — especially as compared to more familiar forms of captivity such as zoos and circuses. They have become almost revered for their perceived powers of rehabilitation and virtual rebirth (an elephant gets to be an elephant again), but are also subject to certain expectations that may conflict with the realities of sanctuary life. In its truest form, the modern captive wildlife sanctuary provides a lifelong home in a more natural environment for wild animals living in captivity. They are places where tigers, lions, elephants, bears, chimpanzees and other wild animals can experience relative freedom and autonomy, following lives spent in various captive settings. Though sanctuaries share some practical issues of caretaking with other forms of captivity, important ethical distinctions separate them. Of all the different captive wildlife facilities and exhibitors, true sanctuaries are the only ones to condemn the very concept of captivity.

I write as someone intimately involved in the sanctuary world due to my work at the Performing Animal Welfare Society (PAWS). The organization operates three captive wildlife sanctuaries in California and cares for elephants, bears, large and small felids, exotic antelope, emu, and non-human primates rescued or retired from circuses, zoos, or private owners. The largest sanctuary is ARK 2000, a 2,300-acre natural habitat refuge where elephants roam the foothills of the Sierra Nevada Mountains, and the big cats and bears are mostly hidden among trees and bushes inside the high fences that mark their spacious enclosures.

ARK 2000 was created to model a more natural and improved way to confine captive wild animals by giving them expansive, dynamic environments and greater autonomy. At the same time, PAWS wholly embraces the notion that captivity, even in the best sanctuaries, is inherently limiting and far from ideal – a sentiment shared with other sanctuaries for both wild and domesticated animals (Jones 91). In fact, sanctuary conditions can hyper-accentuate the shortcomings of captivity by revealing that even in this greatly improved environment wild animals still are unable to fully realize themselves as they would in their natural home ranges. In sanctuaries, unlike the wild, female elephants do not live with their natal families, and tigers do not hunt other animals for sustenance. PAWS co-founder, the late Pat Derby, wrote that after receiving aging Asian elephants Tammy and Annie at the sanctuary, and removing the chains from their legs for the final time, she 'knew we were committed to a program that was necessary but that, in our opinion, could never be ethically or morally justified' (Derby 201).

This article will differentiate a 'true' captive wildlife sanctuary from other captive operations that claim to be sanctuaries, address the ethical problems these sanctuaries share with other captive wildlife facilities and the distinctions that separate them, and discuss public perception of true sanctuaries and challenges related to the sanctuary mission. Provided that true sanctuaries can avoid the impression that they constitute an 'acceptable' captivity, I argue that these facilities can play an important role in changing the public's perception of captive wildlife and bringing an end to the abuse and exploitation of these animals.

What Is a True Captive Wildlife Sanctuary?

As applied to captive wildlife facilities, the term 'sanctuary' can be used in different ways: to accurately describe a facility that rescues and provides lifelong care for wild animals, exploited for greater appeal to the public and to attract donations, or misused to justify keeping wild animals captive. The Merriam-Webster Dictionary defines sanctuary in the broadest of terms as 'a place of refuge and protection' (Merriam-Webster). The Global Federation of Animal Sanctuaries, an international accrediting body for animal sanctuaries that care for wild and domesticated species, provides a more specific definition: 'A sanctuary is a facility that provides

lifetime care for animals that have been abused, injured, abandoned, or otherwise in need' (GFAS, Global Federation). Accredited sanctuaries must meet certain animal care and operational standards, and they cannot buy, sell or trade animals, use them for commercial purposes, breed them, or allow the public to come into direct contact with wild or feral animals. The PAWS definition of a captive wildlife sanctuary goes further, stating: 'A true sanctuary respects the integrity of individual animals, providing safe, healthy, and secure refuge in enclosures specifically designed for the unique animals whom they support' (PAWS, 'What is a Wildlife Sanctuary?').

The core mission of what will be referred to in this article as a 'true' sanctuary, whether caring for wild or domesticated animals, is to serve the individuals in their care by putting their interests first and foremost. These facilities provide captive animals with more spacious and enriched environments, increased opportunities to engage in species-specific behaviors, and the greatest degree of autonomy possible, while tending to their physical, social, and psychological needs. The wild animals found in these facilities may come from zoos, circuses, laboratories, private owners, law enforcement and humane agencies (confiscated captive wildlife), or wildlife agencies (wild animals who cannot be returned to the wild and would otherwise be killed). These sanctuaries do not claim to recreate the wild, but strive to provide specialized habitats in which wild animals can experience a relatively high quality of life.

Some true sanctuaries offer the quiet and privacy of a life lived mostly out of public view. Others allow the public to view sanctuary captives as a means of raising funds necessary for animal care and rescue. Caring for rescued animals can be extremely costly, especially as many arrive with a range of health problems; some animals may require ongoing veterinary care. These sanctuaries may mitigate a zoo-like experience by escorting visitors and providing information about the individual animals in their care, including details on their previous lives, rescue story, and the larger problems associated with breeding and keeping wild animals in captivity. True captive wildlife sanctuaries do not allow the public to come into direct contact with the animals, primarily for reasons of safety but also to respect the autonomy of each individual. While keeper-animal interactions for training and proper husbandry are an important part of overall care, caretakers do not necessarily view the animals as their

'companions.' They place greater value on the social relationships between conspecifics (Jones 93; Doyle, 'African Elephants' 37). As a sanctuary caretaker once told me, they are there to serve the animals.

Some facilities, often called pseudo-sanctuaries (GFAS, 'Truth'), actively breed, offer photos with animals for a fee, or take wild animals off-site for fundraisers, parties, school presentations, and corporate events. These facilities may engage in breeding and/or displaying hybridized and inbred wild animals such as white tigers, who are prone to serious congenital defects (AZA). They may also purchase wild animals from unscrupulous dealers or exhibitors, or trade or sell animals with other facilities. In 2004, PAWS rescued 39 tigers from 'Tiger Rescue,' a pseudo-sanctuary in California that had been breeding big cats and selling photo sessions with cubs to the public. An investigation by state authorities found 90 dead tigers, 58 tiger cubs in freezers, and 54 sick, injured and neglected tigers living in squalid conditions at the facility. The estimated cost, to date, for housing, food, staff, and veterinary care for the tigers taken in by PAWS is \$3.75 million (PAWS, 'Colton Tiger Story').

Pseudo-sanctuaries take advantage of the positive association with the term sanctuary, either by calling themselves sanctuaries or advertising themselves as having rescued the wild animals they are now exploiting. The transfer of a wild animal to a pseudo-sanctuary may not substantially improve that individual's life, as the animal may be moved into similarly cramped and unnatural conditions and will continue to be used for profit. The media frequently promotes facilities that claim to rescue wild animals as being sanctuaries. *Time Out Los Angeles* published a story on ten wildlife sanctuaries to visit in Southern California, writing: 'If you've ever wanted to pet cute animals like a fennec fox or groom a baboon, set course for these sanctuaries' (Juliano). Two of the ten facilities offered public contact with wild animals, handson photo opportunities, and/or taking wild animals off-site for parties and 'educational' events (Animal Tracks; Wildlife Learning Center). The other facilities were primarily wildlife rehabilitation centers; only two were bona fide sanctuaries. This and other similar examples strongly suggest that the public is largely unaware of what constitutes a 'true' sanctuary, and that an information campaign is needed to educate the public in order to end the exploitation of wild animals at pseudo-sanctuaries.

The Sanctuary-Zoo Distinction

Increasingly, zoos are also describing themselves as sanctuaries, relying on a broader definition of the term. This includes facilities accredited by the Association of Zoos and Aquariums (AZA), which differentiate themselves from disreputable 'roadside zoos' by adhering to strict standards that address animal care, physical facilities, and other operational aspects of a zoo. However, the zoo system is simply not created to put the interests of the animals first, and zoos cannot be considered true sanctuaries for a variety of reasons.

Highly respected zoo exhibit designer Jon Coe told Time magazine, 'Even the best zoos today are based on captivity and coercion' (Worland). Although better-run zoos have changed through the years, they fundamentally remain a place where people pay to look at wild animals. Zoo exhibits may lack areas where an animal can escape noisy crowds or animals may be prevented from retreating to a private area, even though numerous studies indicate that forced proximity to humans is a source of stress for wild animals (Larsen et al. 77). The animals are also subject to forced breeding and artificial insemination, and transfers between zoos for breeding and population management purposes that often sever important social bonds. Although zoos claim to breed wild animals for conservation initiatives, few, if any, captive offspring will be reintroduced to the wild. Breeding in zoos primarily serves to produce a supply of wild animals for display. In Zooland, Irus Braverman recognizes the role of conservation in shaping the missions of contemporary zoos, while acknowledging that captive breeding programs have long raised questions among zoo professionals regarding their efficacy and the reality of future reintroductions of captive-born animals to the wild. Controlled breeding programs created to address those questions reveal the conflict between caring for the individual animal, the entire captive population, and beyond to wild populations (161). Braverman concludes that 'zoos more readily sacrifice the individual animal for the benefit of the flock, rather than the other way around' (22).

A rebuttal by the St. Louis Zoo to an opinion piece criticizing zoo captivity describes accredited zoos as 'both sanctuaries and conservation centers' (Macek). The tensions here are evident. A true sanctuary has the welfare of the individual animal as its focus, whereas the priority for a conservation center is a human-based behavioral outcome. As the term is used in

zoos, conservation centers are places that help visitors 'connect exhibits to ecosystems, society to wildlife' (Skibins), though there is virtually no evidence to prove this actually occurs. In any case, the welfare of the individual animal remains secondary to zoo aims. Zoos remain places where animals are bred, traded with other zoos, or otherwise managed in the interests of the zoo and the 'species.' The rebuttal further claims that 'zoos provide a safe haven for species under threat' (Macek). Dale Jamieson argues in 'Zoos Revisited' that our obligation is not to 'species' but to individuals. He explains that we often make the mistake of 'attributing to species the properties of individual creatures. Individual creatures have hearts and lungs, species do not. Individual creatures often have welfares, but species never do' (61). Jamieson describes this as 'sacrificing the lower-case gorilla [individual] for the upper-case Gorilla [species],' thereby reducing wild animals in zoos to genetic repositories at the expense of the animals themselves (173).

Nor are zoos always safe for wild animals. Animals in zoos have fallen victim to war, floods, life-support system malfunctions (54 dead stingrays at Brookfield Zoo), struggling economies (50 animals dead from starvation in Venezuelan zoos) and other calamities (33 reptiles dead of unknown causes at Knoxville Zoo) (Williams-Harris; Zachos; Stelloh). Elephants often develop serious physical problems that end their lives prematurely due to confinement in small exhibits (Clubb et al. 1649), and great apes are prone to heart problems (Great Ape Heart Project). Zoos may kill healthy wild animals for various reasons, including animals deemed genetically unimportant; European zoos 'management-euthanize' an estimated 3,000-5,000 animals per year (Barnes). In the period of just one month in 2017 zoos made headlines worldwide for the violent deaths of a flamingo stoned and kicked to death in a Prague zoo, a rhinoceros in a zoo near Paris named Vince who was killed and his horn sawn off, and a crocodile in Tunis who was stoned to death by zoo visitors (PBS). Similar violence has occurred in the United States. In 2016 a zoo visitor in Florida grabbed a flamingo named Pinky and threw her to the ground; she was euthanized due to her injuries (Watts). The introduction of tigers for mating has resulted in deaths, including female Malayan tiger Tiga Tahun at the San Diego Zoo and female Sumatran tiger Baha at the Sacramento Zoo (Sorto; Stickney). Multiple accounts from around the world have detailed people entering zoo exhibits, resulting in animals being

killed. Highly notable is the gorilla Harambe at the Cincinnati Zoo, who was shot and killed after a child climbed over a fence and into his enclosure (Hanson). Animals trying to escape their captivity have also lost their lives. On Christmas Day in 2007, a tiger named Tatiana at the San Francisco Zoo was shot and killed after she leaped out of her enclosure and attacked three men who were taunting her, killing one (Marshall). Other incidents include a gorilla at the Dallas Zoo in 2004, and a tiger at the Lowry Park Zoo in Florida in 2006, both shot by zoo employees (Associated Press, 'Gorilla's Escape' and 'Escaped Tiger'). A rare, presumably successful escape was made by the octopus, Inky, who reportedly 'broke out' of the National Aquarium in New Zealand by exiting through a small gap in the top of his tank, crossing eight feet of flooring, and gliding down a 164-foot long drainpipe straight into the ocean (Bilefsky).

Detroit Zoo Director Ron Kagan argues that zoos can and should be sanctuaries by giving captive wild animals substantial control and significant choice and putting their interests first (Kagan). Control and choice in captivity are relative to the conditions in which an animal is kept (including climate) and often subject to management needs, whether in a zoo or sanctuary, though true sanctuaries that provide larger spaces and more natural conditions for animals allow greater opportunity for more choice and control. Kagan also calls for rescuing captive wild animals from deplorable situations such as circuses, roadside zoos, and private menageries. (To its credit, the Detroit Zoo is one of the few zoos that have rescued captive big cats, bears, and other wild animals; the zoo also relocated two elephants to the PAWS sanctuary, for ethical reasons.) Even if rescued, wild animals in zoos are still subject to zoo management practices that include public display, inter-zoo transfers, possible separation of bonded animals, or, less likely due to unknown genetics, breeding.

Lori Gruen suggests that zoos can move toward a sanctuary ethic by transitioning from 'places of public spectacle to places where animal well-being is the primary commitment.' In addition to providing for the animals' basic needs, they would have to treat the animals with dignity, allow greater choice, and, importantly, the opportunity to escape the gaze of others (Gruen). Some zoos claim to provide greater choice and control, and may create areas where animals can avoid being seen, but they also continue to treat animals as representatives of a species, and manage them collectively as a species. Those zoos accredited by bodies such as the

AZA are expected to participate in species breeding programs and animal exchanges between accredited zoos (and sometimes non-accredited zoos) that may be detrimental to an individual and that individual's social partner or group. These practices would have to be abandoned if zoos were to become sanctuaries and truly put the interests of the animals as individuals first.

True Captive Wildlife Sanctuaries and the Ethics of Captivity

Reintroducing captive wild animals to their ancestral lands is largely impracticable. Most were born in captivity and lack the skills to survive in nature, they are accustomed to humans (which could be deadly for them), and many animals received by true sanctuaries are older or suffer health problems. So the wild animals in true sanctuaries are captives for life, which is morally problematic. Even under improved conditions, the animals are unable to exercise their capabilities fully, or wholly realize their physical, social and cultural worlds. In her essay on captivity and the need for moral repair, Karen Emmerman writes, 'Though we can give the animals more space than they had in exploitative captive environments, we can never give them a natural life that meets all of their species-typical needs' (221). True sanctuaries may share the limitations of captivity with other captive facilities, but there are important distinctions between them.

True sanctuaries and other places of captivity, particularly better-run zoos, engage in necessary management practices that include daily husbandry, management, training required for husbandry and veterinary procedures, enrichment, and veterinary care. They also share many of the ethical problems of captivity, to different degrees: humans control every aspect of an animal's life, including where they live, what and when they eat, and with whom they socialize. The animals are dependent on human caretakers for all their basic needs, enrichment to alleviate boredom, and, particularly in the case of social animals held solitarily, contact with another living being. Humans manipulate natural activities such as breeding, and, in many cases, determine when an animal's life will end.

Whether in a sanctuary or other facility, animal management involves limitations. The animals are subject to human timetables for their care and feeding, and possibly for access to the

outdoors if they spend their nights inside. Because humans are diurnal primates, sanctuary activities (e.g. cleaning, feeding, health checks, facility maintenance) take place during the day, though staff may be on-site overnight to monitor the animals. Daytime activities may conflict with the cycles of animals who are nocturnal, such as wild felids who would normally be at rest during the day. (Even if wild felids were to be tended to at night, it would be impossible for caretakers to safely work without the use of bright lights.) At sanctuaries that are not open to the public, daytime distractions are at a minimum. Once husbandry tasks are completed, the cats can be left in peace. Sanctuaries that offer tours to the public may strive to respect the privacy of the animals by limiting visiting hours. Still, the animals are subject to public gaze, which, as Emmerman states, 'complicates an organization's mission' (224). In these sanctuaries, animals who may have spent their lives performing in circuses or confined for display to the public are still subject to the objectifying gaze of humans, similar to zoos and other types of 'entertainment'. The animals may be disturbed by frequent activity, such as tours, unless there is adequate space for them to fully retreat or remain unseen. Even then, human sounds and smells are likely inescapable.

Healthcare is an important aspect of animal management that may or may not be tolerated by a wild animal. Many animals arrive at sanctuaries with pre-existing health conditions due to inadequate diets, poor living conditions, and/or lack of veterinary care; some may require long-term specialized care. To ensure that husbandry (which includes health checks) and veterinary care can be properly conducted, a variety of wild animals, including chimpanzees, big cats, elephants, and bears, are often trained using the 'protected contact' method, which can help minimize use of anesthesia and make general husbandry less stressful. Protected contact relies on positive reinforcement training and requires a protective barrier between the animal and the caretaker. This method is beneficial for animals and humans alike: it protects caretakers from potential injury, and the animals have greater autonomy because they can choose whether to participate in training sessions, exams, or certain veterinary procedures, and can leave at any time. More intensive or invasive treatments may require sedation. Betterrun zoos also utilize protected contact training. Unfortunately, some zoos (and all circuses) still train elephants with negative reinforcement and the bullhook — a sharp, steel-tipped device

resembling a fireplace poker. Handlers strike, hook and prod elephants with the bullhook, exerting control through fear and pain.

Another benefit of protected contact training is the opportunity it provides for caretakers to build a relationship of trust with the animals, which can contribute to an animal's rehabilitation in a true sanctuary. Nicholas, an Asian bull elephant at PAWS, came from a circus where he was separated from his mother by age two, and trained with a bullhook to perform tricks such as walking on a balance beam and riding a tricycle. When Nicholas first arrived at PAWS his fear of punishment was evident. This five-ton elephant would flinch or cower if you so much as moved your arm too quickly, expecting to be struck. At his previous facility, he was so fearful and aggressive that veterinarians had to sedate him to perform even the most basic testing, such as blood collection. At PAWS, Nicholas gradually, and in his own time, learned that he would not be reprimanded or harmed, and that his cooperation earned him desirable treats and kind words. Today, he voluntarily, and quite eagerly, engages with caretakers in his own care.

True sanctuaries observe a no-breeding policy, which represents yet another aspect of human control over captive wild animals' lives. For social animals such as elephants, experts Joyce Poole and Petter Granli believe it is not possible to fully realize the wellbeing of females without offspring. At the same time, they acknowledge that breeding in captivity has long-term consequences for the animals (Poole and Granli 15). Even if elephants were housed and bred in a greatly expanded and more natural facility their numbers would inevitably increase to the point where, due to size limitations, intervention would be required to maintain a sustainable group size. Such interventions could include the transfer of elephants to other facilities, which could potentially break up family members, or killing elephants to create more space, measures that a true sanctuary would not consider. As space and resources are limited in sanctuaries, breeding more animals would reduce available room for other individuals in need of improved conditions. True sanctuaries commit to the care of the animals for life, so space only becomes available when an animal's life reaches its natural end or euthanasia is necessary due to suffering and disease. The decision to euthanize an animal is made with the best interests of the individual

animal in mind, relying on careful veterinary assessment and personal knowledge of the animal, who may have lived at the sanctuary for a very long time, sometimes decades.

Beyond these issues, other important, though less obvious, effects on captive wild animals are in need of ethical scrutiny. Sue Savage-Rumbaugh, writing about the welfare of chimpanzees in captive environments, describes how captivity contradicts the processes that allow them to live their lives fully:

No captive environment requires cooperation or group coordination, so captive apes have no need to construct and maintain a cultural stance toward mutual group action across significant spans of time. Their captive environment negates the possibilities of travel, kinship structure, roles within the group, group-based mental worlds, and constructs of cultural realities. However, as human beings, we know that it is precisely these types of mental processes that provide meaning for our human minds. (Savage-Rumbaugh et al. 12)

For highly intelligent, vigorous, and social animals such as elephants, captivity lacks the complexity of everyday life in nature that 'requires critical decision-making, fluid social interactions with family members and mates, navigation in an ever-changing environment, and free agency that cannot be matched in captivity' (Doyle 52). In captivity, elephants' lives are defined by the limitations of the captive environment that determine group size, activities, health, and behavior. Absent are the essential interactions, choices, and self-determining activities that free-living elephants engage in daily and that give meaning to their lives. This includes the mental challenges that come with living in a dynamic environment where elephants must recognize friend or foe, determine safe and unsafe areas, remember sources of food and water during times of drought, acquire critical survival skills through social learning or direct experience, and socialize with other families, more distant relations, or strangers. Small captive enclosures deprive elephants of the space necessary for vital exercise, complex sources of mental stimulation (both social and environmental), and appropriate social groupings that are necessary to basic wellbeing.

Captive wildlife sanctuaries hold a large number of wild felids, especially tigers, due to the rampant breeding of these cats for cub petting attractions, roadside zoos, and the exotic 'pet' trade. The number of tigers held captive in the US is unknown due to lack of regulation, but estimated at 7,000 – greater than the number of tigers that exist in the wild. Zoos, circuses and sanctuaries account for about 500 tigers, with the remaining cats owned by breeders, exhibitors, dealers, and, especially, private owners (Tigers in America).

The inability of carnivores to hunt in captivity is often thought to be an ethical problem. Clubb and Mason's study of the welfare of captive large carnivores, including big cats and large bears, found that these animals displayed 'the most evidence of stress and/or psychological dysfunction in captivity' (qtd in Connor), including stereotypic behavior and elevated infant mortality. Stereotypic behaviors are abnormal, repetitive actions such as pacing, rocking, and head bobbing. These behaviors are not found in free-living wild animals, and are considered to be indicators of poor welfare in captive wildlife. A study by Kroshko et al. found that the greatest predictors of stereotypic pacing in captive carnivores are home range sizes and hunting style, mainly long chase distances, and that 'aspects of being naturally wide ranging and a pursuit predator cannot readily be relinquished' (203). The authors acknowledge these activities may be behavioral needs that animals have 'instinctive, intrinsic propensities to perform ... even when the physiological needs that the behavior serves are fulfilled, and even when these behaviors are not [now] necessary for fitness' (Kroshko et al. ctg Mason and Burn, 2011). The Clubb and Mason study concluded that keeping wide-ranging carnivores captive 'should either be fundamentally improved or phased out' (473). Another ethical concern related to the confinement of carnivores is the killing of other animals to feed them, causing some to raise the question of whether sanctuaries for large carnivores hurt more animals than they help.

While bearing in mind the ethical problems of captivity, it is important to acknowledge that true captive wildlife sanctuaries improve the welfare of wild animals greatly: such sanctuaries are places of physical and psychological healing from the stresses and trauma of prior types of confinement. True sanctuaries promote rehabilitation of the individual by providing more natural and interesting environments and addressing the specific needs of individuals. This creates opportunities for increased agency, greater command of one's environment, and, in the

best cases, enables an animal to realize more of her or his capabilities and find a sense of self. Sanctuary workers are an important part of the healing process. While maintaining their own safety (caretakers can never let their guard down when working with dangerous wild animals), they nurture relationships with the animals through patience, consistency, and respect, and earn trust by demonstrating that they will not cause harm. Positive relationships with humans can help a captive animal to become more relaxed and secure, though animals who have endured severe abuse may never fully trust humans. More subtle aspects of sanctuaries that lend even more support to individual rehabilitation include privacy, the relative quiet of living in nature, the opportunity to relax from the pressures of close confinement and social stress, and more natural environments and vistas that expand their visual, auditory, and olfactory worlds.

An example of the transformative power of sanctuaries is found in the experience of African elephant Lulu at the PAWS sanctuary. Lulu came from a zoo where she was dominated by another elephant for many years. The elephant would bully Lulu, sit on her, and prevent her from accessing food. (Add to this the trauma of being violently taken from her family in the wild at age two, when she still would have been nursing and entirely dependent on her mother.) Lulu was so traumatized that when she came to PAWS she cowered in the presence of the other elephants, shrinking into a sitting position. Pat Derby worked individually with Lulu, slowly introducing her to the other elephants until she gained enough confidence to socialize with them. Today Lulu comfortably spends time with elephants Toka, Mara, and her closest companion Maggie, foraging in and exploring their environment.

The confidence and social ease that Lulu shows today are measures of the sanctuary's success in providing a more natural and fulfilling life for this particular elephant — at least to the extent possible at this captive facility. Working with Lulu as an individual, understanding her personality and history, and taking actions that were in her best interest contributed to the outcome for her. (Pat Derby stayed with Lulu for weeks after her arrival, even sleeping in the barn so she could monitor the elephant.) Indications that a true sanctuary is fulfilling its goals (again, as much as is possible in captivity) include greater expression of species-typical behaviors that indicate an animal has attained a level of comfort with the environment and/or conspecifics. Behavioral signs of comfort can include play, foraging, grooming other animals, sleeping out in

the open, and engaging with the surroundings (e.g. exploring, marking territory). A decrease in those behaviors may indicate that adjustments to an animal's environment or routine may be necessary to restore comfort. For example, if a tiger does not get along with or is nervous around another tiger in a nearby cage, shifting either individual to a different cage will usually put the animal at ease. More natural environments and the reduction of physical and emotional stressors (e.g. lack of space, social incompatibility) allow greater opportunity for comfort and species-typical behaviors.

At the same time, true sanctuaries recognize that wild animals are never entirely comfortable with their captivity. Even captive-bred animals are fully aware that their cages contain and limit them. However, true sanctuaries can strive to provide the highest level of comfort possible for the animals. At the PAWS sanctuary we are very pleased when an elephant who is newly introduced to the existing group of elephants lies down to take a nap. This suggests that she is at ease with the other elephants and the environment, as a sleeping elephant is in a vulnerable position. (One or two other elephants usually 'stand guard' over the sleeping elephant, remaining close by until she rises.) While some indicators of comfort and species-specific behaviors may be found in better-run zoos, others may not. For example, I have never seen an adult elephant in a zoo lie down during the day to sleep. This suggests that a certain level of comfort necessary for this behavior has not been achieved.

Captive facilities may be able to monitor behaviors and comfort levels, but there is no way to truly know how a wild animal perceives confinement, or if death would be preferable to a life in captivity, no matter how relatively good the conditions. In general, animals have a strong survival instinct. In even the worst of conditions individuals will struggle to live, though some may succumb to disease or become withdrawn and cease to eat. A few reports suggest that captive wild animals may have ended their own lives: Kathy, a dolphin in solitary confinement, swam into the arms of her former trainer, stopped breathing (dolphins must consciously take breaths), and sank to the bottom of the tank; and a dolphin named Peter reportedly refused to breathe after being relegated to an isolated tank and becoming increasingly depressed (Greenwood). The question was raised when Octavia, an octopus in a California aquarium, died after removing a plastic pipe that served as a drain, emptying her tank of water

(Kennedy). Awareness of death is commonly attributed only to humans, though we are learning more about other animals' understanding of death, particularly in highly social species such as chimpanzees, dolphins and elephants (Biro et al.; McComb, Baker & Moss; Alves et al.). However, a more apt question may be: do wild animals in captivity have an interest in living? Certainly, it is incumbent on us to err on the side of caution where the interests of animals are concerned. In the absence of evidence to show otherwise, we should assume that wild animals have an interest in living, in perhaps all but the most extreme circumstances of suffering. In true sanctuaries, animals who previously had been subjected to terrible abuses appear to thrive, versus merely survive (as they may do in other captive facilities), evidenced by tangible physical, social, and psychological improvements. Lulu is one example of this. When deprived of life animals suffer the worst kind of harm. Still, presumably better-run zoos have killed healthy animals to make space for other animals preferred for display or their genetics. Many would argue that it would be better if these animals were never born into captivity to begin with, and point to these killings as reasons for ending breeding programs in zoos.

Perhaps the greatest difference between true captive wildlife sanctuaries and other captive wildlife facilities is that sanctuaries openly acknowledge that even the improved conditions they provide are still not enough to meet the needs of the animals in their care, making their captivity morally problematic. Jones believes that captivity in the sanctuary context is ethical because of intentionality and assurance that the animals' confinement is as 'free feeling' as possible (95). But intentionality and greater freedom do not change the fact that the animals' needs cannot be fully met or that the animals cannot be in control of their lives. True sanctuaries may provide a better life for the animals in their care, but they remain captives. As Pat Derby once succinctly stated, 'All I can do is make their prison as comfortable as possible' (Vitello). At the same time, true sanctuaries strive to provide the animals with a more fulfilled life and sense of self, and work to end the practices that brought them there. Emmerman states, 'Faced with the kinds of abuse, exploitation, and trauma the animals have endured, sanctuaries are likely our best chance to make amends' while 'performing part of the work of moral repair' (225), which involves nurturing relationships of trust through compassion, care, and empathy.

Captive Wildlife Sanctuaries and Public Perception

Anecdotal evidence appears to support a growing concern among the public for the welfare of wild animals. A 2015 Gallup poll found that 69% of Americans are concerned about the use of wild animals in circuses (Riffkin), and according to a November 2016 article in *Forbes* magazine, circus attendance in the US has dropped an estimated 30 to 50 percent over the last 20 years (Vinton). The Ringling Bros. and Barnum & Bailey Circus ended its elephant acts in 2016, citing changing public tastes. Then, in 2017, the circus made the stunning announcement that after 146 years it was shutting down entirely, following a decade of falling ticket sales (Lush). The film *Blackfish* exposed the suffering of captive orcas in the marine park SeaWorld, sparking a public backlash that caused attendance to decline and stock prices to spiral, and led to the park's pledge to phase out the confinement of orcas altogether (Pedicini). The convenience killing of animals in zoos such as Marius, the young giraffe at the Copenhagen Zoo in Denmark who was labeled as genetically undesirable, drew worldwide condemnation (Eriksen and Kennedy).

Scientific research is contributing to a greater understanding of wild animals and reinforcing moral arguments against captivity. Studies have demonstrated that elephants, dolphins, and great apes are self-aware; the cognitive abilities of corvids and parrots rival great apes in many psychological areas, and octopuses possess neurological substrates known to generate consciousness (Plotnick et al.; Olkowicz et al.; Low). Psychologists propose that some nonhuman animals experience psychological trauma and mental health issues similar to humans, such as post-traumatic stress disorder (Bradshaw et al. 807). Important authors such as primatologist Frans de Waal and conservationist Carl Safina take a different perspective of the world, one in which 'humans are not the measure of all things' (Safina 2). Frans de Waal writes, 'I look at human cognition as a variety of animal cognition. It is not even clear how special ours is relative to a cognition distributed over eight independently moving arms, each with its own neural supply, or one that enables a flying organism to catch mobile prey by picking up the echoes of its own shrieks' (5).

Amid, or despite, changing public attitudes toward wild animals and a greater understanding of animals' capabilities, attractions such as zoos and circuses remain part of the cultural fabric of many societies — at least for now. The enduring fascination with viewing wild

animals in captivity is frequently described as an attempt to connect with nature and the other animals who have disappeared both physically from our lives and from having a place of profound relevance in them (Berger). Zoos strongly emphasize this disconnect and promote themselves as places where the public can re-connect with nature, even though the 'nature' presented in animal exhibits is a simulacrum. In his article on the influence of zoos and aquariums on culture, Skibins describes animal exhibits as 'fully immersive experiences of curated nature' through which zoos can 'build cultures of care and conservation'. (Again, there is little evidence to back this claim.) Environmentalist Derrick Jensen counters the zoo position, positing that the display of wild animals in zoos reinforces human dominance over nature by showing that humans are more powerful than them, the animals have no existence independent of humans, and that humans can and must manage and control their lives (86). Captive operations, including zoos and circuses, bolster Jensen's latter two points by repeatedly telling the public the wild is not safe for animals, they are better protected in captivity, and that there is simply no wild left for them to return to. These messages were utilized in the controversial import of 17 wild-caught elephants from Swaziland to three US zoos in 2016. Conservationists and animal advocates called for the elephants to be relocated to a protected park or wildlife sanctuary in Africa rather than sent to zoos. The zoos coordinating the import claimed that no safe areas existed for the elephants on the entire continent (Room for Rhinos). At the very same time, these and other zoos advertise their own efforts to conserve elephants in the wild and urge their visitors to make contributions to those efforts. If Manfredo et al. are correct and society is feeling less dominionistic over wild animals (a utilitarian view of wildlife that prioritizes human well-being over wild animals), then there is good reason for zoos and other captive operations to fear they may lose relevance among the public going into the future. Alternatively, compassion and caring can be manipulated to promote the idea that captivity is safer for wild animals than their natural home ranges, and therefore justified.

People who are drawn to looking at captive wild animals want to know that the animals are being well cared for. One indicator of animal wellbeing, at least for some people, is the size of an animal's living space. The Brookfield Zoo in Illinois devoted a blog to addressing feedback from visitor surveys showing concern that zoo exhibits are not large enough for certain animals.

The zoo assured people that the quality of the exhibit provided by the zoo is more important than the amount of space given to an animal. Using elephants as an example, the zoo wrote, 'If elephants have all the resources they need, adequate food, water and mates, there is no reason for elephants or any animal to walk long distances' (Miller). This response fails to consider that elephants' bodies have evolved for long distance movement, or the often-lethal conditions such as foot disease and arthritis that result from being sedentary. It also ignores that animals are more than just consumers of food and water, or that free-living wild animals are physically and mentally engaged in dynamic social and ecological systems that cannot be recreated in an acre or two in captivity. Finally, there is no acknowledgment that a captive environment should include both quality and space.

For those people who are conflicted about going to zoos, true captive wildlife sanctuaries that are open to the public may be a preferable venue in which to view animals. Anecdotal evidence found in online reviews of a selection of well-run captive wildlife sanctuaries in the US indicates that the public differentiates these facilities from zoos because of their animal rescue mission (sources on file with author). Comments also specifically note the larger spaces and more natural environments for the animals as positive features of the sanctuary. My own interviews with visitors to the PAWS sanctuary (which is not open to the public except for rare planned events) produced similar responses to those online. People came to see wild animals in environments that are more natural and spacious than in other facilities. This suggests that the public views sanctuary confinement as more beneficial for the animals, which, in turn, makes the experience more acceptable to the observer, even though the animals are still behind fences and in cages. A sanctuary's mission of rescue and providing individual care may align with the public's view of wildlife as deserving of rights and care as described by Manfredo et al. The rescue mission may also lend justification in the eyes of the public for this type of captivity, and provide further reason for the spectator to feel good about this particular experience of watching animals. Some people treat a visit to a true captive wildlife sanctuary as if it were a conscious and responsible choice. Over the years I have received numerous emails from people seeking a more ethical way, in their minds, to view captive wild animals, particularly elephants. They see a true sanctuary as the preferred way to satisfy their desire to look at these animals, and usually

experience wild animal captives but do not want to take them to zoos. In a way, this demonstrates that the public is becoming more enlightened about and concerned with the different forms of captivity for wild animals. For sanctuaries that are open to the public, this can provide a critical opportunity to further educate people about the limitations of captivity for wild animals, even in true sanctuaries, and to prompt an examination of their own perceptions of and relationships with these animals. For sanctuaries that are not open to the public, or only occasionally available to the public, engaging in public outreach is key to ending the systems of animal exploitation that ceaselessly produce, use, and dispose of wild animals, only some of whom end up in true sanctuaries.

However, the 'feel good' view of captive wildlife sanctuaries could also serve as a way for people to normalize and feel better about captivity, rather than acknowledging its inherent limitations for the animals. People drawn to captive wildlife sanctuaries often have certain expectations about how the animals in them should behave. These expectations may conflict with the realities of captivity, and can create an idealized view of captivity and how wild animals adjust to an environment that cannot fully meet their complex physical, social and psychological needs. The public may find solace in believing that the animals are content with their captive lives, and therefore view this form of captivity as acceptable, even though captivity remains inherently problematic for the animals. This is especially evident in sanctuaries that care for elephants. People tend to envision elephants living as one big, happy 'herd' in a sanctuary, because that's how they see them in nature. This ignores the fact that free-ranging female elephants live in tight-knit family groups, remain with their mothers for life, and do not normally live with strangers (Lee and Moss 30). The female elephants who make up the greatest number of elephants in sanctuaries are unrelated, as are most elephants in captive facilities (Keele; Olson). Many of these elephants carry with them the early trauma of separation from their wild mothers and families when babies – possibly having seen them gunned down – and abusive treatment in captivity. Those born in captivity may have lived in dysfunctional social groups; some may have been unnaturally rejected, and even attacked, by their own mothers. Each elephant's life history and experiences influence her response when introduced to other

elephants, so some elephants may bond, some may simply tolerate others, and some may be aggressive toward another elephant. In the last instance, the separation of individual elephants may be necessary to protect their wellbeing. While sanctuaries try to ameliorate the symptoms of previous trauma, this is not always possible for every individual; some animals may continue to manifest residual behaviors related to past experiences. The PAWS sanctuary is not open to the public in order to reduce human intrusion into the animals' lives, provide a peace and privacy not possible in other captive situations, and promote rehabilitation. In a true sanctuary environment, animals can find comfort and are able to live their own lives to the greatest extent possible in captivity, with no human expectation aside from their wellbeing.

By educating the public about the natural lives of elephants and other wild animals, in contrast to the constraints and deprivations of captivity, true sanctuaries can work to offset unrealistic expectations and create a deeper understanding of the ethical problems created by their confinement. It is understandable that people would desire to see wild animals behaving just as their free-living counterparts would — one of the benefits true sanctuaries provide for wild animals is the opportunity to express themselves through a greater range of species-typical behaviors than they might show in other facilities. Still, the idealizing of true captive wildlife sanctuaries in this way can divert attention from their limitations, as well as the more nuanced consequences of captivity. For example, what does it mean for an animal when certain natural behaviors are no longer practicable or necessary? What happens when group coordination and cooperation are no longer necessary for chimpanzee survival? Or when a tiger or lion is unable to hunt? If elephants have no need to exercise a broad repertoire of vocalizations, do they eventually lose elements of their language? These sensory, cognitive, and cultural losses may not impair welfare, but they have significance for wild animals as sources of meaning in their lives.

The larger question facing captive wildlife sanctuaries is whether they can change the frame in which the public sees and thinks about captive wild animals and the ethics of their captivity. There is some evidence to suggest they do. By giving earth's largest land mammals expansive and natural environments in which to live, sanctuaries like PAWS and The Elephant Sanctuary in Tennessee have created an alternative to the facilities in which elephants

traditionally have been confined, and raised awareness of their profound needs. An online search produces numerous news articles questioning the ethics of captivity for elephants and whether they should continue to be confined in zoos and circuses (Berens; Jabr). Sanctuaries like Chimp Haven have raised awareness about the plight of captive chimpanzees in research and shown a better way for these animals to live by providing more natural environments and social opportunities. Today, chimpanzees are no longer used in invasive research and many in the US are being moved to true sanctuaries. Sea pen sanctuaries for captive marine mammals such as orcas, dolphins, and belugas are the next frontier for captive wildlife sanctuaries and are sure to challenge the status quo, drive awareness about the plight of these animals, and raise ethical questions about their captivity. Lori Marino, president of The Whale Sanctuary Project, suggests that sanctuaries are a first step toward reconsidering our relationships with other animals, as they involve 'restoration, reconciliation, and restitution' (Marino). Emmerman, on the other hand, argues that sanctuaries are places of moral repair rather than restitution because 'lifelong captivity is the best we can offer animals' (228). Certainly, sanctuaries have an important role in provoking questions about the confinement of wild animals and the public's involvement in perpetuating their use and mistreatment.

If current trends continue, captive wildlife sanctuaries will attract increased attention as people become even more aware of the cognitive capabilities of other animals, concerned with their treatment in captivity, and anxious about the extinction of wild animals. The public already seems to view the captive wildlife sanctuary as a preferred alternative to gazing at animals in traditional captive institutions, whether they visit a sanctuary in person or online. People also appear to grasp and gravitate toward sanctuaries' rescue mission. It is worth noting that during the rare times when PAWS is open to the public, I have observed that visitors behave very differently than the way people often act in zoos. There is more of an atmosphere of respect for the animals, with no one shouting at or making fun of them. True sanctuaries can and should build on changing attitudes toward captive wildlife and the public's seeming attraction to sanctuaries as places more in line with their own values, in order to further transform public perception of captivity for wild animals.

The challenge for captive wildlife sanctuaries is to foster a deeper understanding of the ethical complications of captivity and the role of true sanctuaries in mitigating the harms wild animals suffer in confinement. Complicating this mission is the potential for the public to view true sanctuaries as places where captivity is acceptable, and therefore normalize this form of it, rather than question its limitations for wild animals. But this challenge also brings an opportunity for education and enhancement of the public's changing perception of captive wildlife. There is an important connection that true captive wildlife sanctuaries can nurture, and it is not the artificial concept of a re-connection to nature sold by other captive facilities. Rather, sanctuaries can lead people to question the connection between their own relationships with wild animals and the role that plays in perpetuating their captivity in circuses, zoos, laboratories, marine parks, film productions, cub petting operations, and other exploitive situations. Should true sanctuaries achieve this, it would be an important step toward abolishing the systems of abuse and exploitation that created the need for sanctuaries to begin with.

Works Cited

- Alves, F., et al. 'Supportive Behavior of Free-Ranging Atlantic Spotted Dolphins (*Stenella frontalis*) Toward Dead Neonates, with Data on Perinatal Mortality'. *Acta Ethologica*, vol. 18, 2015, pp. 301-304.
- Animal Tracks, Inc. 'Ranch Tour,' www.animaltracksinc.org. Accessed 28 Mar. 2017.
- Associated Press. 'Gorilla's Escape, Violent Rampage Stun Zoo Officials.' *NBCNews.com.* 19 Mar. 2004, www.nbcnews.com/id/4558461/ns/us_news/t/gorillas-escape-violent-rampage-stun-zoo-officials/#.WOr_KIXNwcg. Accessed 9 Apr. 2017.
- ---. 'Escaped Tiger Shot to Death at Lowry Park Zoo'. *The Ledger*, 24 Aug. 2006, www.theledger.com/article/LK/20060824/News/608147669/LL/.

 Accessed 8 Apr. 2017.
- AZA. 'Welfare and Conservation Implications of Intentional Breeding for the Expression of Rare Recessive Alleles'. Association of Zoos and Aquariums Animal Welfare Committee: Taskforce on Animal Breeding Practices, June 2011, www.aza.org/assets/2332/aza_white_paper_inbreeding_for_rare_alleles_18_jan_201 2.pdf. Accessed 9 Apr. 2017.
- Barnes, Hannah. 'How Many Healthy Animals Do Zoos Put Down?' *BBC News*. 27 Feb. 2014, www.bbc.co.uk/news/magazine-26356099._Accessed 9 Apr. 2017.
- Berens, Michael. 'Elephants Are Dying Out in America's Zoos'. Seattle Times, 4 Dec. 2012. http://seattletimes.com/html/nationworld/2019809167_elephants02m.html. Accessed 25 Sept. 2017.
- Berger, John. 'Why Look at Animals?' About Looking. Pantheon Books, 1980, pp. 1-26.
- Bilefsky, Dan. 'Inky the Octopus Escapes from a New Zealand Aquarium.' New York Times, 13 Apr. 2016. www.nytimes.com/2016/04/14/world/asia/inky-octopus-new-zealand-aquarium.html. Accessed 16 July 2017.
- Biro, D., et al. 'Chimpanzee Mothers at Bossou, Guinea Carry the Mummified Remains of their Dead Infants'. *Current Biology*, vol. 20, issue 8, 27 Apr. 2010, pp. R351-R352.

- Bradshaw, G.A., et al. 'Elephant Breakdown'. Nature, vol. 433, 24 Feb. 2005, p. 807.
- Braverman, Irus. Zooland: The Institution of Captivity. Stanford University Press, 2013.
- Clubb, Ros, et al. 'Compromised Survivorship in Zoo Elephants'. *Science*, 12 Dec. 2008, vol. 322, no. 5908, p. 1649.
- Clubb, Ros, and Georgia Mason. 'Captivity Effects on Wide-ranging Carnivores'. *Nature*, vol. 425, 2 Oct. 2003, p. 473.
- Connor, Steve. 'Large Roaming Carnivores Suffer Most in Zoos'. *The Independent*, 1 Oct. 2003, www.independent.co.uk/news/science/large-roaming-carnivores-suffer-most-in-zoos-89406.html. Accessed 18 Mar. 2017.
- de Waal, Frans. Are We Smart Enough to Know How Smart Animals Are? W.W. Norton & Company, 2016.
- Derby, Pat. 'Changes in Social and Biophysical Environment Yield Improved Physical and Psychological Health for Captive Elephants'. *An Elephant in the Room: The Science and Well-Being of Elephants in Captivity*, edited by Debra L. Forthman et al., Tufts Center for Animals and Public Policy, 2009, pp. 109-207.
- Doyle, Catherine. Do African Elephants in a Zoo and a Sanctuary Show a Preference for Certain Keepers as Measured by Responses to Olfactory and Auditory Cues? MS thesis, Canisius College, 2013.
- ---. 'Captive Elephants'. *The Ethics of Captivity*, edited by Lori Gruen, Oxford University Press, 2014, pp. 38-56.
- Emmerman, Karen. 'Sanctuary, Not Remedy, The Problem of Captivity and the Need for Moral Repair'. *The Ethics of Captivity*, edited by Lori Gruen, Oxford University Press, 2014, pp. 213-230.
- Eriksen, Lars, and Maey Kennedy. 'Marius the Giraffe Killed at Copenhagen Zoo Despite Worldwide Protests'. *The Guardian*, 9 Feb. 2014, www.theguardian.com/world/2014/feb/09/marius-giraffe-killed-copenhagen-zoo-protests. Accessed 9 Apr. 2017.

- George, Kelly A., et al. 'Changes in Attitudes Toward Animals in the United States from 1978 to 2014'. *Biological Conservation*, vol. 201, 2016, pp. 237-242.
- GFAS. Global Federation of Animal Sanctuaries, www.sanctuaryfederation.org/gfas/for-sanctuaries/standards. Accessed 2 Apr. 2017.
- GFAS. 'The Truth About Sanctuaries', www.sanctuaryfederation.org/gfas/for-public/truth-about-sanctuaries/. Accessed 22 Sept. 2017.
- Great Ape Heart Project. 'About the GAHP,' greatapeheartproject.org/about/aboutgahp. Accessed 8 Apr. 2017.
- Greenwood, Arin. 'What it Means to Say a Dolphin Committed Suicide.' *Huffington Post*, 13 June 2014, www.huffingtonpost.com/2014/06/13/dolphin-commits-suicide_n_5491513.html. Accessed 20 July 2017.
- Gruen, Lori. 'Shifting Toward an Ethics of Sanctuary'. *HumansandNature.org*, www.humansandnature.org/shifting-toward-an-ethics-of-sanctuary. Accessed 2 Apr. 2017.
- Hanson, Hilary. "New Video Shows Zoo Gorilla with Boy Before Ape Was Shot Dead.'

 *Huffington Post, 29 May 2016, www.huffingtonpost.com/entry/gorilla-cincinnati-zoovideo-shot_us_5749f024e4b03ede44150165. Accessed 9 Apr. 2017.
- Jabr, Ferris. 'The Science Is In: Elephants Are Even Smarter than We Realized'. *Scientific American*, 26 Feb. 2014, www.scientificamerican.com/article/the-science-is-in-elephants-are-even-smarter-than-we-realized-video/. Accessed 4 Apr. 2017.
- Jamieson, Dale. 'Zoos Revisited'. *Ethics on the Ark*, edited by Bryan G. Norton et al., Smithsonian Institution Press, 1995, pp. 52-65.
- Jamieson, Dale. 'Against Zoos'. *Morality's Progress: Essays on Humans, Other Animals, and the Rest of Nature*. Oxford University Press, 2002, pp. 166-175.
- Jensen, Derrick and Karen Tweedy-Holmes. Thought to Exist in the Wild: Awakening From the Nightmare of Zoos. No Voice Unheard, 2007.

- Jones, Miriam. 'Captivity in the Context of a Sanctuary for Formerly Farmed Animals'. *The Ethics of Captivity*, edited by Lori Gruen, Oxford University Press, 2014, pp. 90-101.
- Juliano, Michael. 'The Top Wildlife Sanctuaries in Southern California'. Time Out Los Angeles, 20 Oct. 2016, www.timeout.com/los-angeles/things-to-do/the-top-wildlifesanctuaries-in-southern-california. Accessed 28 Mar. 2017.
- Kagan, Ron. 'The Show Is Over'. HumansandNature.org, www.humansandnature.org/the-show-is-over. Accessed 28 Mar. 2017.
- Keele, Mike. 'Asian Elephant North American Regional Studbook'.
 31 Aug. 2010 to 31 Oct. 2014.
- Kennedy, Michael. 'Octavia the Octopus Dies as Tank Empties'. Los Angeles Times, 12 Apr. 1994, http://articles.latimes.com/1994-04-12/local/me-44986_1_san-pedro-aquarium. Accessed 20 July 2017.
- Kroshko, J., et al. 'Stereotypic Route Tracing in Captive Carnivora is Predicted by Speciestypical Home Range Sizes and Hunting Styles'. *Animal Behavior*, vol. 117, 2016, pp. 197-209.
- Larsen, Megan J., et al. 'Number of Nearby Visitors and Noise Level Affect Vigilance in Captive Koalas'. *Applied Animal Behavior Science*, vol. 154, 2014, pp. 76-82.
- Lee, Phyllis C., et al. 'Welfare and Well-Being of Captive Elephants: Perspectives From Wild Elephant Life Histories'. *An Elephant In the Room: The Science and Well-Being of Elephants In Captivity*, edited by Debra L. Forthman et al., Tufts Center for Animals and Public Policy, 2009, pp. 22-38.
- Low, Phillip. 'The Cambridge Declaration on Consciousness'. Francis Crick Memorial Conference on Consciousness in Human and Non-Human Animals, Cambridge University, 7 July 2012, fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf.

 Accessed 14 Apr. 2017.

- Lush, Tamara. 'Ringling Bros. Circus to Close after 146 Years'. *Associated Press*, 14 Jan. 2017, bigstory.ap.org/020bc7b2f16f4446ade338bcf4a500ed. Accessed 28 Mar. 2017.
- Macek, Michael. 'Rebuttal to Article 'A Better Life for Animals can be Found Outside of Zoos'.

 Letter. *The Concordian*, 10 Feb. 2017, theconcordian.com/2017/02/rebuttal-to-article-a-better-life-for-animals-can-be-found-outside-of-zoos/.

 Accessed 28 Mar. 2017.
- Manfredo, M.J., Teel, T.L. and Bright, A.D. 'Why Are Public Values Toward Wildlife Changing?' *Human Dimensions of Wildlife*, 2006, vol. 8, pp. 287-306.
- Marino, Lori. 'Emphasizing Animal Well-Being and Choice: Why Zoos and Aquariums Should Become Sanctuaries', www.humansandnature.org/emphasizing-animal-well-being-and-choice. Accessed 28 Mar. 2017.
- Marshall, Carolyn. 'Tiger Kills 1 After Escaping at San Francisco Zoo'. *New York Times*, 26 Dec. 2007, www.nytimes.com/2007/12/26/us/26tiger.html. Accessed 9 Apr. 2017.
- McComb, K., Baker, L., and Moss, C. 'African elephants show high levels of interest in the skulls and ivory of their own species.' *Biology Letters*, 2, 2006, pp. 26-28.
- Merriam-Webster. 'Definition of sanctuary'. www.merriam-webster.com/dictionary/sanctuary. Accessed 7 Apr. 2017.
- Miller, Lance. 'Room to Roam'. *Blog: Center for the Science of Animal Welfare*, 13 Mar. 2017, www.czs.org/roomtoroam. Accessed 7 Apr. 2017.
- Olkowicz, Seweryn, et al. 'Birds Have Primate-like Numbers of Neurons in the Forebrain'. *PNAS*, vol. 113, no. 26, pp. 7255-7260.
- Olson, Deborah. 'North American Region Studbook for the African Elephant'. 2011 Edition.
- PAWS. 'What is a Wildlife Sanctuary?' www.pawsweb.org/what_is_a_wildlife_sanctuary.html. Accessed 2 Apr. 2017.
- ---. 'The Colton Tiger Story: The Largest Big Cat Rescue in US History'. *PAWS Newsletter*, June 2014,

- archive.constantcontact.com/fs126/1101778242429/archive/1117740042044.html. Accessed 8 Apr. 2017.
- PBS. 'How are US Zoos Keeping Animals Safe?' *PBS Newshour*, 22 Mar. 2017, netnebraska.org/node/1070340. Accessed 7 Apr. 2017.
- Pedicini, Sandra. 'First Orcas, now Orlando: SeaWorld's Challenges Just Don't Let up'.

 Orlando Sentinel, 21 Aug. 2016, www.orlandosentinel.com/business/tourism/osseaworld-new-problems-20160818-story.html. Accessed 8 Apr. 2017.
- Poole, Joyce H., and Petter Granli. 'Mind and Movement: Meeting the Interests of Elephants'.

 An Elephant in the Room: The Science and Well-Being of Elephants in Captivity, edited by

 Debra L. Forthman et al., Tufts Center for Animals and Public Policy, 2009, pp. 2-21.
- Riffkin, Rebecca. 'In U.S., More Say Animals Should Have Same Rights as People'. *Gallup.com*, 18 May 2015, www.gallup.com/poll/183275/say-animals-rights-people.aspx.

 Accessed 8 Apr. 2017.
- Room for Rhinos. 'Unsafe Africa', www.roomforrhinos.org/unsafe-africa/.

 Accessed 14 Apr. 2017.
- Safina, Carl. Beyond Words: What Animals Think and Feel. Henry Holt and Company, 2015.
- Savage-Rumbaugh, Sue, et al. 'Welfare of Apes in Captive Environments: Comments On, and By, Specific Groups of Apes'. *Journal of Applied Animal Welfare Science*, vol. 10, no. 1, pp. 7-19.
- Skibins, Jeffrey. 'Fostering Resilient Relationships between People and Wildlife: The Influence of Zoos and Aquariums on Culture'. *Humansandnature.org*, www.humansandnature.org/fostering-resilient-relationships-between-people-and-wildlife. Accessed 9 Apr. 2017.
- Sorto, Gabrielle. 'Female Tiger Dies in a Mating Attempt Gone Wrong'. *CNN*, 11 Feb. 2016, www.cnn.com/2016/02/11/us/tiger-mating-attack-irpt/index.html. Accessed 25 Sept. 2017.

- Stelloh, Tim. "Catastrophic Loss": 33 Reptiles Found Dead at Tennessee Zoo". NBCNews.com, 26 Mar. 2017, www.nbcnews.com/news/us-news/catastrophic-loss-33-reptiles-found-dead-tennessee-zoo-n738786. Accessed 9 Apr. 2017.
- Stickney, R. 'Tiger Mauled to Death During Mating Attempt'. *NBC News San Diego*, 23 Dec. 2013, www.nbcsandiego.com/news/local/Tiger-Mauled-San-Diego-Zoo-Breeding-Attack-Malayan-Death-Killed-237067811.html. Accessed 25 Sept. 2017.
- Teel, Tara L. and Michael J. Manfredo. 'Understanding the Diversity of Public Interests in Wildlife Conservation'. *Conservation Biology*, vol. 24, no. 1, pp. 128-139.
- Tigers in America. 'Summary'. www.tigersinamerica.org/summary.htm.

 Accessed 14 Mar. 2017.
- Tobin, Mitch. 'Top Biologist: Half of All Species May Be Gone By 2100'. National Geographic News, 9 Aug. 2002, http://news.nationalgeographic.com/news/2002/08/0809_020808_wireowilson.ht ml. Accessed 10 Apr. 2017.
- Watts, Amanda. 'Pinky the Flamingo Dies after Attack by Busch Gardens Guest, Officials Say'. *CNN.com*, 4 Aug. 2016, www.cnn.com/2016/08/03/us/flamingo-attacked-buschgardens/. Accessed 9 Apr. 2017.
- Vinton, Kate. 'Ringmaster Of The Universe: How Billionaire Kenneth Feld Keeps Ringling Bros. Circus Alive'. Forbes.com, 30 Nov. 2016, www.forbes.com/sites/katevinton/2016/11/30/how-billionaire-kenneth-feld-keeps-ringling-bros-circus-alive/#15445e35443a. Accessed 9 Apr. 2017.
- Vitello, Paul. 'Pat Derby, Champion of Animal Welfare, Dies at 69'. New York Times, 22 Feb. 2013. www.nytimes.com/2013/02/22/us/pat-derby-crusader-for-animals-dies-at-69.html?_r=0. Accessed 18 July 2017.
- Wildlife Learning Center. 'Birthday Parties'.

 www.wildlifelearningcenter.org/programs/birthday-parties-wlc/.

 Accessed 28 Mar. 2017.

- Williams-Harris, Deanese. 'Brookfield Zoo Investigating Cause of Malfunction that Left 54 Stingrays Dead.' *Chicago Tribune*, 13 July 2015, www.chicagotribune.com/news/local/breaking/ct-54-stingrays-are-dead-after-malfunction-of-tank-at-brookfield-zoo-20150712-story.html. Accessed 4 Apr. 2017.
- Worland, Justin. 'The Future of Zoos: Challenges Force Zoos to Change in Big Ways'.

 Time.com, 16 Feb. 2017, time.com/4672990/the-future-of-zoos/.

 Accessed 28 Mar. 2017.
- Zachos, Elaina. 'Animals Starving in Venezuela Zoos.' *National Geographic.com*, 28 July 2016, news.nationalgeographic.com/2016/07/animals-starve-in-venezuela-zoos/.

 Accessed 24 Mar. 2017.