THE HONOURABLE MARTY KLYNE
SENATOR – SASKATCHEWAN

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SENATE | SÉNAT
CANADA

April 4, 2024

Standing Senate Committee on Legal and Constitutional Affairs
Senate of Canada
Ottawa, Ontario K1A 0A4

By email

Dear Colleagues,

Re: LCJC study of Bill S-15 (elephant and great ape captivity)

Please find enclosed two letters from elephant experts for consideration in your study of Bill S-15. I previously submitted these letters to the Legal and Constitutional Affairs Committee on September 7, 2023, in relation to the study of Bill S-241 (*Jane Goodall Act*).

For further reading, you may also be interested in a March 5, 2021 CBC article regarding a cancelled sale of elephants from Canada, a December 16, 2021 CBC article regarding elephant rides and shows in Canada, and a July 9, 2019 *New York Times Magazine* article regarding elephant captivity in North America. As well, you may be interested in the developments to phase out elephant captivity at the Granby Zoo and Edmonton Valley Zoo.

In addition, in considering potential amendments or observations in relation to Bill S-15, the Committee may find of use World Animal Protection Canada's reports on the exotic pet trade (2019) and roadside zoos (2022) in Canada.

Sincerely,

Senator Marty Klyne

Enclosed: 1. Elephant experts' letter on Bill S-241 (June 3, 2022)
2. Elephant experts' response to International Elephant Foundation (Jan. 6, 2023)

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June 3, 2022

Senator Marty Klyne
The Senate of Canada
Ottawa, ON
Canada
K1A 0A4

Re: Bill S-241 – The Jane Goodall Act

Dear Senator Klyne,

We, the undersigned, are distinguished international elephant specialists, representing a wide range of disciplines, including natural science, conservation, elephant behaviour and psychology, veterinary medicine, animal welfare, academia, and animal care and management.

We are pleased to support Bill S-241 – the *Jane Goodall Act* – which would phase-out the display of elephants for entertainment and the domestic trade in elephant ivory and trophies. We applaud you for introducing this important bill to improve protection for elephants, among other wild animal species. We stand ready to contribute our specialist expertise on elephants to assist the Senate's review and consideration, and to discuss solutions for the management of the remaining elephants.

As specialists on elephant well-being, we can attest that public display facilities keeping captive elephants are no longer supported or justified by the growing body of science on their socio-biological needs. In these situations, elephants endure conditions that are inadequate to meet their needs, as they lack essential components of wild ecosystems and inhibit expression of natural behaviours.

Scientific and experiential evidence indicates that the use of elephants as performers, riding objects, and exhibit specimens can be physically and psychologically detrimental to these highly intelligent, sensitive, and self-aware animals. Confinement, restraint, travel, harmful training practices, exhibition, isolation, noise, performing, and exposure to the public while living in unnatural environments can adversely affect elephants' health and welfare.

Elephants are extremely intelligent animals, with multifaceted physical, social and spatial needs. Elephants are large-brained mammals who display complex cognitive capabilities[1], great intelligence[2], sentience[3] and empathy, with the ability to understand the intentions and emotions of others [4,5]. Elephants are also self-aware.[6] Along with dolphins, great apes and humans, they can recognise themselves in a mirror, implying a sense of self.[7] Elephants form and use tools[8], and solve problems by insight. They have a sense of death and mourn dead family members.[9] Elephants can recognise at least 100 other elephants by their voices[10], and they can determine the ethnicity, gender and age of humans from acoustic cues.[11]

Elephants live in unusually large social networks, with a highly organized structure involving strong family bonds that can last a lifetime.[12,13] Relationships among females radiate out from the mother-offspring bond through family, bond group, clan, and sub-population, and among independent

adult males through male groups of kin and non-kin[14]. They form alliances and coalitions with other elephants and can work together to solve problems.[15] Elephants have a highly developed communication system using all their senses in a wide range of tactile, olfactory and visual signals, seismic and acoustic communication.[16]

Elephants are adapted to living in a variety of landscapes and walking long distances. Home range sizes have been shown to extend to 10,000 square kilometres or more for African elephants and to 400 square kilometres or more for Asian elephants.[17,18] They have exceptional long-term memory and mapping skills to locate food and water over vast distances and time periods[19], with matriarchs referred to as "repositories of social knowledge".[20] Elephants' daily activities involve intellectual and cognitive challenges centred on their use of space: locating and manipulating a wide variety of food, remembering locations of water and seasonal food items, searching for mates, and avoiding potential danger.

The ability – and need – to express these many highly regarded qualities conflict with the inadequate physical and social conditions found in captive environments, resulting in compromised welfare with long lasting detrimental psychological and physical effects.[21,22]

Captive environments do not meet elephants' complex physical needs.
The restrictions that captivity imposes on an animal's behaviours are increasingly recognised as being deleterious to cognitive development, normal social development, and, later in life, on reproduction and health.[23] Captive living conditions differ drastically from those for which elephants are adapted. Over millions of years, elephants have evolved to forage in expansive home ranges, moving with their family groups or bull associations. Elephants' musculoskeletal system and feet are adaptations for walking long distances.[24] Walking and other exercise has essential health benefits vital for humans and other animals, not only for muscle development, welfare and physical health[25] but for development of the brain.[26] Voluntary exercise can increase levels of brain derived neurotrophic factor (BDNF) and other growth factors, stimulate neurogenesis, increase resistance to brain insult and improve learning and mental performance.[27] Lack of movement and poor substrates are also associated with serious health problems (see below).

In captive environments, outdoor spaces for elephants are orders of magnitude smaller in size than elephants' ranges in the wild, with limited variety of natural vegetation and substrates on which to walk. Indoor spaces are even smaller than those outdoors and may contain hard substrates such as concrete[28]. Due to Canada's climate and cold weather, elephants may spend most of their time indoors and possibly chained during that time. The tethering or chaining of elephants is meant to immobilize and control the animal. Chaining can be temporary or continuous. Elephants in traveling shows may spend up to 23 continuous hours on chains[29], including during transport and at performance venues.

In sum, captive environments simply cannot approximate the spatial and environmental conditions necessary for the health and welfare of elephants.

Elephant health problems in captive conditions.
Serious health problems and decreased life span in captive-held elephants are well documented.[30,31] Captive elephants may suffer arthritis, osteoarthritis, hernia (*Hernia perinealis*), swelling of the knee joints (*Bursitis praepatellaris*), skin calluses (*Tyloma olecrani*), and abscesses.[32]

Blackleg (bacterial inflammation with necrosis) and foot problems, such as pathological lesions in the pads and nails, split nails, abscesses, torsion, ulcerations, and overgrown cuticles, are common in captive-held elephants because of inactivity and lack of access to natural substrate to keep foot pads and nails supple and naturally trimmed.[33] Musculoskeletal impairments are one of the major health issues in captive-held elephants, including degenerative joint disease, low bone density[34], and ensuing lameness[35]. Although the causes of these problems can be varied, they all indicate poor husbandry systems.[36]

Captive elephants are also subject to infectious diseases. A highly fatal haemorrhagic disease, the Endotheliotropic Elephant Herpesvirus (EEHV) occurs in both Asian and African elephants in captive situations, with some cases found among Asian elephants in their natural range countries.[37] The disease, while largely asymptomatic in the wild, particularly devastates neonatal and weaning-age elephants in captivity.[38] Tuberculosis (TB) is a pervasive problem in captive elephants. The human variant is transmitted by humans to elephants, and an elephant can infect other humans and elephants on close contact, indicating two-way transmission.[39,40] Most occurrences of human TB in zoos have been discovered in Asian elephants, although there is some evidence that it occurs in African elephants as well.[41,42]

Conclusion

Elephants are not suited to any form of captivity, as no captive facility can fulfil the basic biological, social, spatial, cognitive and intrinsic requirements of elephants. The keeping of elephants in captivity in Canada should be brought to an end, with every effort made to ensure those elephants that remain in captivity are provided with the best possible conditions to meet their welfare requirements and ensure their well-being for the remainder of their lives.

Signed

Dr. Lucy Bates, Lecturer, Centre for Social Learning and Cognitive Evolution, University of St Andrews; U.K.
Scott Blais, CEO and Co-founder, Global Sanctuary for Elephants
Carol Buckley, CEO, Elephant Aid International; USA
Dr Richard Byrne FRS Edinburgh, Emeritus Professor, Centre for Social Learning and Cognitive Evolution, University of St Andrews; UK
Dr. Audrey Delsink, PhD, Professional Natural Scientist (Ecology) and elephant specialist; South Africa.
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Dr. Hilde Vanleeuwe, WCS/ DCF grant coordinator and research associate, Member of IUCN-SSC African Elephant Specialist Group and the in-situ/ ex-situ taskforce; USA, Kenya

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6th January 2023

Senator Marty Klyne
The Senate of Canada
Ottawa, ON
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K1A 0A4

Re: Jane Goodall Act (S-241) – Response to claims made by the International Elephant Foundation

Dear Senator Klyne,

We, the undersigned, are distinguished international elephant specialists, representing a wide range of disciplines, including natural sciences, conservation, elephant behaviour and psychology, veterinary medicine, animal welfare, academia, and animal care and management. On June 3, 2022, we sent you a letter of support for Bill S-241 – the Jane Goodall Act – to phase-out the display of elephants for entertainment and end the domestic trade in elephant ivory and trophies.

The following information is intended to rebut misleading or incorrect information provided in a letter by the International Elephant Foundation (IEF) in regard to the proposed Jane Goodall Act. The signatories to this letter hope the following information will contribute to a fuller understanding of the issues.

Keeping elephants in zoos does not necessarily lead to conservation action by patrons.

IEF's claims that zoos serve as source of inspiration for visitors, and that this inspiration will automatically convert to conservation action, have been made for decades by zoos. Still, no substantial evidence exists to support this claim. The IEF quotes two studies: The first one featured participants already predisposed to support conservation, and it only gauged the expression of their desire to become involved in conservation. No follow-up was carried out to determine if action was taken, despite the inherent bias of participants. The second study is a college student's study-abroad thesis and it has never been peer reviewed.

In comparison, a 2016 study[1] found that statements of intent by zoo visitors did not convert to action. Following a zoo visit, no significant increase in pro-sustainability behaviour was found, despite participants having stated that they 'felt' they had changed their behaviour. The study concludes that zoo visits 'fail to lead to actual sustainable behaviour change'.

A similar result was found in a 2007 study of 1,000 people at six UK zoos. The authors concluded that they 'found very little evidence, in the zoos that we sampled, of any measurable effect of a single informal visit on adults' conservation knowledge, concern or ability to do something useful.'[2]

Other studies have shown similar minimal or non-existent behaviour change in zoo visitors when it comes to conservation.[3,4,5] This was also found when specifically exploring the impact of interactions with 'ambassador' species.[6] A recent paper assessed 19 peer-reviewed studies on the outcomes of zoos' animal ambassador encounters. These are activities where zoo visitors directly interact with an animal, and they are often considered by zoos to be the most impactful. However, the paper found that most studies 'lacked rigour and claims were based on the absence of negative impacts rather than evidence of benefits'. The authors concluded that in order to justify continuation of animal ambassador encounters, 'animal welfare costs must be proven to be minimal whilst having demonstrable and substantial visitor educational value.'[7]

Conservation funds generated by zoos do not justify keeping sentient beings in inadequate captive environments.

Zoos may contribute funds to conservation projects, however, this does not justify confining sentient and complex species in captivity. In fact, when compared to the operational budgets of zoos, contributions to conservation are shockingly small. In 2000, a study concluded that zoos and aquaria belonging to the AZA only spent 0.1% of their operational budgets on conservation related projects.[8] If conservation is supposed to be the primary purpose of zoos, this is an incredibly ineffective and, considering the costs on the animal side, unethical way of generating funds.

Zoos' scientific contributions largely relate to overcoming captive management problems.

The IEF claims that the elephants living in Canada have made a direct contribution to 'valuable discoveries and insights that help all elephants around the globe'. However, the list of studies conducted at African Lion Safari shows that these studies overwhelmingly were related to reproduction. Elephants in the wild do not have a problem reproducing, so this research has no relevance to in situ conservation. It is purely aimed at the preservation of elephants in captivity, who are subject to a variety of reproduction-related problems including infertility (females stop cycling at an early age), dystocia (birth complications), and stillbirths.[9,10]

References to research that has led to knowledge advancement regarding the elephant endotheliotropic herpesvirus (EEHV) are also primarily relevant to the management of elephants in captivity. While the virus does occur in the wild, there has been no evidence to show that its presence presents a significant threat to current populations. This is quite contrary to captive populations, where a large percentage of captive-born elephants succumb to EEHV-related symptoms.[11] Tentative figures indicate that in North American zoos 66% of Asian elephant deaths are due to EEHV.[12] It seems that a captive environment leads to a much higher likelihood of developing clinical signs after an EEHV infection, which most likely points to the unnatural conditions of captivity.

Elephants are still captured in the wild to populate zoos displays, exposing the shortcomings of zoos.

To date there has not been a single case of captive elephants boosting conservation or wild populations. On the contrary, wild elephants are still taken out of the wild to boost captive populations that are otherwise unsustainable.

The IUCN-SSC African Elephant Specialist Group, composed of leading conservation practitioners, has noted in its 2003 position statement that "Believing there to be no direct benefit for in situ conservation of African elephants, the African Elephant Specialist Group of the IUCN Species Survival Commission does not endorse the removal of African elephants from the wild for any captive use."

Elephants are not well suited to living in cold weather conditions.

The IEF states that elephants are adaptable and can thrive in a variety of settings, including colder climates in Canada. They reference a study by Rowe et al. (2013) without providing context that is critical to properly understanding its aim and results. In fact, the authors did not study the effects of cold on elephants. They looked at heat dissipation in elephants (and dinosaurs), using elephants at the Audubon Zoo in Louisiana who were active in daytime temperatures ranging from about 50 degrees to 95 degrees Fahrenheit (10-35°C). The IEF states that elephants store heat in their core, suggesting they can withstand the effects of cold – which is not entirely true. Elephants can suffer physical damage in cold weather conditions when exposed to them for periods of more than a few hours. Extremities, such as the ears, are especially vulnerable in frigid conditions. One telling example

concerns an elephant named Ruth at the Buttonwood Park Zoo in Massachusetts. In 2014, she escaped from her barn overnight during a blizzard and suffered hypothermia (low body temperature) and frostbite on her ears after a single night's exposure.[13]

Elephants are highly active animals. In nature, they are on the move for about 20 out of 24 hours. Movement is essential to their health and welfare. Cold temperatures during the winter months in Canada preclude the possibility of a meaningful amount of spent time in outdoor areas instead of their much smaller indoor stalls. For example, according to the website Weatherspark: "The *c*old season in Cambridge, Ontario [site of African Lion Safari] lasts for 3.3 months, from December 2 to March 13*,* with an average daily high temperature below 38°F. The coldest month of the year in Cambridge is January, with an average low of 15°F and high of 28°F." This means that for about a quarter of the year it is not possible to allow elephants to spend an extended amount of time outdoors. Instead, they would have to largely remain in indoor areas, greatly restricting the healthful movement elephants need.

Space is important to elephants.

The IEF states that 'elephant welfare is less about available space and more about how that space is utilized', citing a study by Meehan et al., 2016. However, this study contains a caveat by the authors which explains that the results were limited to findings from exhibits at participating zoos in North America and that '*future studies incorporating larger areas could potentially find associations between space and welfare outcomes.'* In other words, researchers may not have found any measurable differences in welfare relating to space because zoo enclosures are relatively similar in size – and several orders of magnitude smaller than elephants' natural home ranges. Welfare studies conducted in much larger areas with suitable habitat would be more reflective of the conditions that are important for optimal elephant welfare.[14]

In the wild, much of elephant behaviour involves cognitively engaging activities that depend on space: locating and manipulating a wide variety of food items, remembering and finding the locations of water and nutrients that vary with seasons, searching for potential mates, choosing areas to associate with or avoid other elephants as social partners. All these space-related cognitive behaviours are missing in captivity, greatly reducing the elephants' welfare.

Holdgate et al. (2016), who gathered data on walking rates in 30 different zoos in North America, concluded that elephants walked far shorter distances than those in the wild.[15] In general, larger enclosures offer more opportunities for movement and larger social groups, making space an important element for welfare. Exercise regimes do not replace the natural requirements of movement for elephants, whose bodies have evolved to walk great distances. They also do not replace cognitive requirements. Although some zoos – a minority, it should be clear – may provide some form of exercise, these opportunities are generally under the close control of keepers and provide no scope for elephants' autonomy and choice.

Elephants are not thriving in zoos.

The IEF claims that 'Elephants in human care do not face the same stresses of drought, lack of food, poaching, human-elephant conflict … as elephants in range countries face.' Despite the lack of these stresses and the provision of food and veterinary care, elephants in zoos do not reproduce well and continue to die prematurely in zoos.[16] In addition, a recent paper by Jacobs et al. (2021) provides support for the hypothesis that captive elephants 'sustain impoverishment-related neural deficits and dysregulation similar to what has been documented in other species.'[17] In other words, these animals' brains are negatively and persistently impacted by the conditions of captivity.

The sanctuary environment benefits elephants.

The IEF suggests that elephants at African Lion Safari would experience undue stress if relocated to a 'sanctuary model' facility. There simply is no evidence to support this statement. In fact, sanctuaries report improvements in elephants following their arrival, including a decrease in frequency of – or the eventual absence of – stereotypies; social bond formation, including between elephants previously held alone; decrease in aggressive behaviour toward keepers; and recovery from abuse and trauma.[18,19]

Conclusion

In conclusion, we would like to reiterate the statement made in our letter dated June 3, 2022: Elephants are not suited to any form of captivity, as no captive facility can fulfil the basic biological, social, spatial, cognitive and intrinsic requirements of elephants. The keeping of elephants in captivity in Canada should be brought to an end, with every effort made to ensure that those elephants remaining in captivity are provided with the best possible conditions to meet their welfare requirements and ensure their well-being for the remainder of their lives.

Signed

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Dr. Jan Schmidt-Burbach, PhD, Wildlife veterinarian and elephant specialist, World Animal Protection; Germany

Peter Stroud, independent zoological consultant, former zoo Curator and Director; Australia

Will Travers OBE, Elephant expert and Chair of Species Survival Network Elephant Working Group, Born Free Foundation; U.K.

Andrea Turkalo, Associate elephant conservation scientist, Wildlife Conservation Society; USA

Antoinette van de Water, PhD candidate, Director Bring the Elephant Home; Thailand, South Africa

Dr. Hilde Vanleeuwe, WCS/ DCF grant coordinator and research associate, Member of IUCN-SSC African Elephant Specialist Group and the in-situ/ ex-situ taskforce; USA, Kenya

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