

**Welfare Assessment of Asian Elephants (*Elephas maximus*) Libby and Bunny  
Following Observations at Two Performances of the Garden Bros. Circus on June  
16, 2017 in Westcliffe, Colorado**

Philip K. Ensley, DVM, Dipl. ACZM  
September 1, 2017



For

PETA Foundation  
1536 16<sup>th</sup> Street NW  
Washington, DC 20036

# **Welfare Assessment of Asian Elephants (*Elephas maximus*) Libby and Bunny Following Observations at Two Performances of the Garden Bros. Circus on June 16, 2017 in Westcliffe, Colorado**

Philip K. Ensley, DVM, Dipl. ACZM

**Introduction-** Two female Asian elephants (*Elephas maximus*), an endangered species, named Libby and Bunny are believed to be 50 and 49 years of age respectively. They are a leased elephant act from the Carson & Barnes Circus by the Garden Bros. Circus and were observed during two Garden Bros. performances in Westcliffe, Colorado on June 16, 2017. The circus performed at 4:30 and 7:30 PM at the Wet Mountain Valley Saddle Club Arena. A request was made by the PETA Foundation to provide a welfare assessment of these two elephants based on experience from prior circus and captive elephant observations and inspections<sup>2,3,4,5,6,7</sup> and relying upon practical experience as a zoo veterinarian with over thirty years of clinical experience with elephants and other exotic species. Emphasis in assessing the welfare of Libby and Bunny was in addition based on reviewing cases involving alleged abuse of captive and performing elephants<sup>8,9,10,11,12</sup> and other species<sup>13,14,15,16</sup> over the past 25 years.

**Summary-** Libby and Bunny performed at an outdoor rodeo style arena in a center ring where the elephants were either seen by patrons from a grandstand located on one side of the arena or from “VIP ringside” seating. During intermissions or halftime breaks from circus performances Bunny provided rides to paying circus patrons. Both elephants were partially visible preceding and in between their ring appearances at one end of the arena where they were stationed side by side between two large tractor trailers and/or motor homes. The appearance time for the two elephants during each circus performance lasted approximately six minutes. **Based on observations, and a review of videos and photographs, I concluded Libby and Bunny to be abused, injured, harmed, and harassed elephants suffering physically, in a state of psychological deterioration, and compromised welfare attributable to their standard of care and living conditions controlled by use of a bullhook.**

**Procedure-** Libby and Bunny were observed, photographed and videoed before, during, and following performances, and at halftime intermissions when Bunny was providing rides. Observations and findings were then reviewed to determine the welfare status of Libby and Bunny.

Observations during Performances- At the beginning of each six minute performance Bunny followed Libby from their holding area walking to the arena ring. Both elephants were led by trainer or handler/presenter Habib Omar who carried a bullhook. A second circus performer was noted riding on Libby’s neck while Bunny walked behind carrying Libby’s tail with her trunk.

Bunny demonstrated noticeable stiffness and a reduced range of motion in her right front carpus or wrist (Fig. 1) compared to an increased range of motion in her left wrist (Fig. 2). Former Ringling Bros. Circus veterinarian Gary West writes “Traumatic events including hyperextension of joints may cause damage to joint margins, and this may lead to the development of joint disease. Performance of certain behaviors may put excessive stresses on joints.” “Decreased range of motion develops as a result of chronic inflammation and fibrosis of soft tissue structures and leads to degenerative joint disease.”<sup>20</sup>



Fig. 1 Bunny walking behind Libby demonstrated stiffness and a poor range of motion in her right front carpus or wrist.



Fig. 2 A greater degree of flexion or range of motion can be appreciated in Bunny's left front carpus.

During a more rapid walking pace Bunny's stiffness was less noticeable entering the ring at the onset of the performance. Osteoarthritis or degenerative joint disease is reportedly diagnosed by a "history of reoccurring lameness that becomes reduced as the animal 'warms up.'"<sup>21</sup>

Arriving at the ring to upbeat tempo music played from speakers both elephants climbed onto metal stools with Libby on Bunny's right as they faced the audience (Fig. 3).



Fig. 3 Bunny, the smaller of the two elephants is on the stool to Libby's left facing the audience.

Of note was an abnormality on one of Libby's left front toe nails (Fig. 4). Although not easily visible in Figure 4, an imperfection or focal loss of nail surface on the toe nail may indicate a previous nail injury or potential chronic abscess opening and infection.



Fig. 4 On Libby's outer left front toe nail there was a loss of nail surface from a prior injury, or an abscess opening and infection.

This finding on Libby was similar to the face of a toe nail on Bunny's left front foot closely resembling an abscess opening or previous injury, and a second toe nail was noted with vertical cracks (Fig. 5).



Fig. 5 Vertical cracks are noted on one of Bunny's left front toe nails and on the toe nail to the right an injury or abscess opening similar to the finding on one of Libby's toe nails.

During the performance callouses were noted on the elephants' elbows as well as areas immediately in front of the knees or stifle region, notably documented on Bunny (Fig. 6). These calluses are caused by a longstanding practice of having performing elephants kneel down on hard and unyielding surfaces.



Fig. 6 Callouses are noted on the elephants' elbows and knees particularly demonstrable on Bunny caused by being forced to kneel and lay down on hard and unyielding surfaces.

While continuing to stand on stools both elephants turned to their right. Bunny placed her front feet up onto Libby's pelvic region while continuing to stand bearing her weight on her rear feet (Fig. 7).



Fig. 7 Bunny carrying her weigh on the rear feet while placing her front feet on Libby.

Both elephants then climbed down in front of their stools and leaned back into sit up positions (Fig. 8).



Fig. 8 Libby and Bunny sitting up on stools. Note the presenter correcting Libby's left front foot position with the blunt end of a bullhook.

Coming down from the stools Bunny followed Libby walking behind and moving counterclockwise across the ring holding Libby's tail with her trunk (Fig. 9).



Fig. 9 Bunny following Libby in a counterclockwise direction across the performance ring.

Each elephant then walked to a position facing a stool (Fig. 10).

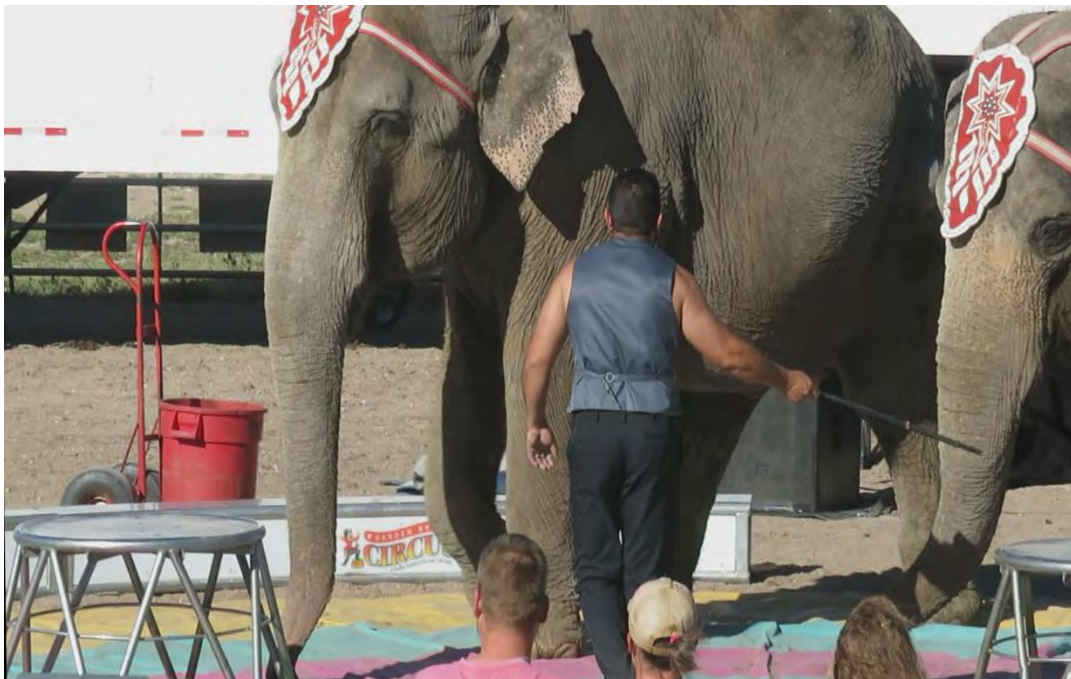


Fig. 10 Gesturing with a bullhook the trainer guided Libby and Bunny to positions in front of the stools.

Libby and Bunny placed their front feet upon the stools while momentarily raising their left front limbs (Figs. 11-13).



Fig. 11 The bullhook used to correct the position of Bunny's right rear leg.

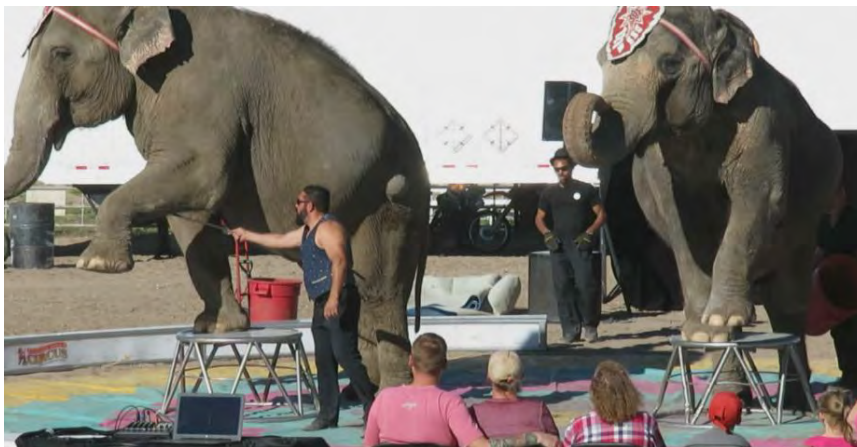


Fig. 12 Note the bullhook used to position Libby's left front leg.



Fig. 13 There was ongoing use of a bullhook to position Libby's left front leg.

Each elephant then turned to their left keeping both front feet on the stools while rotating counterclockwise in a full circle (Fig. 14) around their stools raising their left front foot after completing the circle (Fig. 15).



Fig. 14 Libby and Bunny rotating counterclockwise around their stools.



Fig. 15 The trainer continually used the blunt end and shaft of the bullhook to gesture and touch the elephants and correct postures, position, and elevation of Libby's front foot.

After climbing with all four feet onto their stools Libby and Bunny turned to their left and climbed down leaving their rear feet on the stools again circling counterclockwise to their left around the stools (Fig. 16), then sat up on the stools facing the audience, trunks up (Fig. 17).



Fig. 16 Libby and Bunny again circling counterclockwise now with their rear feet on the stools.



Fig. 17 Libby and Bunny sitting up with the trainer again using the bullhook to correct Libby's left front foot position.

The elephants then stood and turned to their left with Libby following Bunny counterclockwise across the ring (Fig. 18).



Fig. 18 Libby following Bunny across the ring.

Bunny then climbed on a stool raising her right front foot then left front foot, and repeating this several times with her trunk up (Figs. 19-20).



Fig. 19 Bunny standing upon a stool raising her right front foot.



Fig. 20 Bunny alternated raising her right and left front feet several times.

Bunny then turned on the stool counterclockwise, stopping with her rear facing the audience followed by alternately raising her right and left rear feet several times (Figs. 21-22) as if mimicking a dance routine.



Fig. 21 Bunny with her rear to the audience raising her right rear foot.



Fig. 22 Bunny alternated raising her left and right rear feet several times.

Bunny then climbed down from the stool following Libby, turning counterclockwise in place two full circles (Fig. 23).



Fig. 23 Libby on right and Bunny on the left turned two full circles in place counterclockwise.

Libby on the right and Bunny on the left then came to a stop with their right sides to the audience (Fig. 24).



Fig. 24 Note the trainer's bullhook shaft against Libby's trunk after rotating in place and stopping with their right side to the audience.

Following a pause both elephants were then commanded to lay down (Fig. 25).



Fig. 25 Libby on the right and Bunny on the left laying down.

While laying down a second performer began climbing on Libby's neck (Fig. 26).



Fig. 26 A second performer to the right starts to climb on Libby's neck.

Both elephants were then commanded to rise up into a seated position on the ring floor partially bearing their weight on the small of their back, and raising their trunks (Fig. 27).



Fig. 27 Libby on the right and Bunny on the left sitting up.

Both elephants then stood squarely on all four feet. Bunny was then positioned behind Libby notably “rocking” back and forth on her front limbs, shifting her body weight from side to side several times (Figs. 28-30) before raising her front feet onto Libby’s lower back. This behavior was due to hesitation in anticipation of the discomfort and pain from bearing her weight on her rear feet while placing her front feet on Libby’s pelvic region (Fig. 31). Both elephants again are seen trained to continuously elevate their trunks in an upward position.



Fig. 28 Bunny shifting her weight to her left front and side.



Fig. 29 Bunny then shifts her weight to her right side.



Fig. 30 Bunny shifts her weight back to her left side.



Fig. 31 Bunny ultimately places her weight on her rear feet to mount Libby.

After Bunny dismounted Libby, both elephants circled to their left with Bunny holding Libby's tail with her trunk following her into a turn (Fig. 32) to face the audience each raising their left front feet with trunks up (Fig. 33).



Fig. 32 Bunny holding Libby's tail following her counterclockwise.



Fig. 33 Libby and Bunny face the audience holding up their left front foot with trunks up.

Libby then turned to her left with Bunny following with Libby's tail in her trunk. Both then departed the ring returning to their holding station (Fig. 34).



Fig. 34 Libby and Bunny turning to their left in leaving the arena ring returning to their holding station.

On the way back to the holding station Bunny again demonstrated occasional stiffness and reduced range of motion in her right front carpus as opposed to more normal flexion seen in Libby's right front carpus (Fig. 35).



Fig. 35 Note the reduced range of motion or flexion of Bunny's right front carpus compared to the greater degree of flexion or range of motion in Libby's right front carpus.

As the elephants walked back to their station both elephants demonstrated normal flexion or range of motion in their left front carpus (Fig. 36).



Fig. 36 Note more normal carpal flexion of both Libby and Bunny's left front wrists.

Immediately prior to the second six minute ring performance for the 7:30 PM show Bunny again followed Libby holding Libby's tail in her trunk and as she approached the ring, again demonstrating stiffness and a reduced range of motion in her right carpus compared to Libby (Fig. 37).



Fig. 37 Bunny demonstrating stiffness and reduced range of motion in her right front carpus compared to Libby.

Again Bunny demonstrated normal range of motion or flexion in her left front carpal joint more similar to Libby returning to the ring for the second performance (Fig. 38).



Fig. 38 Returning to the arena ring both Libby and Bunny demonstrated a more normal range of motion or flexion in their left front carpal joints.

Observations during Intermissions- Prior to and between elephant performances Libby and Bunny were stationed between two large vehicles best described as being tractor trailers or motor homes (Fig. 39).



Fig. 39 Libby on the right and Bunny on the left stationed during intermission.

Libby was observed before and in between performances displaying stereotypic behavior manifested by swaying continually from side to side or repeatedly from right to left to right over and over again (Figs. 40-44). This repetitive meaningless behavior was not observed with Bunny.



Fig 40 Libby swaying to her right.



Fig. 41 Libby swaying back to her left.



Fig. 42 Libby swaying again back to her right.



Fig. 43 Libby sways back to her left.



Fig. 44 Libby sways again back to her right over and over.

Intermissions occurred prior to the six minute elephant performances. During these time periods Bunny provided rides to the public in a ring adjacent to the arena. While providing rides Bunny was always walked in counterclockwise circles. The trainer utilized the bullhook's blunt end to gesture, touch, and guide Bunny during rides (Figs. 45-47).



Fig. 45 Bunny providing rides to the public. Note the trainer gesturing with a bullhook.



Fig. 46 The trainer touches Bunny in this photograph with the bullhook.

Because the general public has become more aware of the historical harm bullhooks have inflicted on elephants, trainers and handlers instead refer to it as a “guide” and will “palm” the hook end to make the bullhook appear less menacing (Fig. 47-48).



Fig. 47 In this photograph with Bunny giving rides the trainer is shown “palming” the bullhook.



Fig. 48 The trainer continually shows the bullhook to Bunny.

While providing rides the stiffness and poor range of motion or reduced flexion of Bunny's right carpus that was evident prior and following performances was more clearly demonstrable (Fig. 49) compared to a more normal range of motion in her left carpal joint (Fig. 50).



Fig. 49 Bunny's right carpus during rides revealed a consistent poor range of motion while walking.



Fig. 50 Note a more full range of motion or flexion in Bunny's left carpus.

**Assessment of observations-** The use of the bullhook on captive and performing elephants such as Libby and Bunny has become a source of controversy. The bullhook is used to reinforce dominance by its tactile and visual cueing. The bullhook remains a basic potent symbol to reinforce authority. The ultimate purpose of the bullhook is to enforce a harmful standard of care with which elephants cannot cope. Performing elephants like Libby and Bunny were conditioned to fear the bullhook at an early age under a management technique referred to as “free contact.” The bullhook, which has a metal hook and a spiked tip (Fig. 51) plays critical role in a baby elephant’s early training. The elephant is reminded of the discomfort and pain caused by the bullhook, and know they must comply whether there is application of the bullhook or merely the visual presence of it, as Libby and Bunny experienced during their performances and while Bunny was providing rides.



Fig. 51 Trainer/handler or presenter Habib Omar with a bullhook.

Professionally run zoos are abandoning circus-style “free contact” training in favor of modern, safer, and more humane handling methods referred to as “protected contact.” In *Animal Training* (Ramirez, ed. 1999)<sup>19</sup> G. Priest reported, “Elephants are intelligent, social and potentially lethal animals. In the past 15 years 15 keepers have been killed by elephants.” In free contact training, “The keepers’ dominance is established early on in the relationship, and the need for physical dominance decreases as the social bonds develop between trainer and animal. Unfortunately, this control system requires 100% compliance from the animal 100% of the time. There is no room for deviation, nor can the keeper safely allow any breakdown in

control, as this can lead to catastrophic results.” Public safety for circus patrons is an equally important consideration. During the elephants’ performances there were clearly no appropriate safety barriers for the ringside public VIP seating areas (i.e Figs. 7-34).

The high number of zookeepers killed by elephants undoubtedly influenced the Association of Zoos and Aquariums (AZA) Board of Directors, who on July 29, 2011, unanimously approved, “As soon as possible and no later than September 1, 2014, elephant care providers at AZA facilities with elephants shall not share the same unrestricted space with elephants, except for certain well-defined circumstances.” These new AZA guidelines require its members who maintain elephants to institute protected contact management schemes, thus eliminating free contact or direct contact management programs such as in a circus, which relies upon physical dominance over elephants reinforced with discipline and the use of the guide, ankus or bullhook. As a result, most zoos—and soon all zoos—will be using protected contact management practices, which require more sophisticated keeper skill sets to train elephants for husbandry and veterinary medical procedures, making the guide, ankus or bullhook obsolete.

The circus elephant performance activities demonstrated by Libby and Bunny are non-species typical behaviors coupled with prolonged periods of confinement in severely restricted spaces between performances and during travel in tractor trailers, which do not allow natural exercise for their limbs. Performing elephants are forced into unnatural body positions by using bullhooks, as noted with Libby and Bunny and are controlled by tethering with chains at an early age which puts them at risk for injury. Over time, young growing elephants that are forced into repetitive, athletic, and non-species typical behaviors will suffer excessive wear and tear on their joints, predispose themselves to acute injury, acute and chronic pain, and discomfort. The elephants ultimately suffer the long term cumulative effects of these activities. As they grow in size, weight, and reach older age, they have the ability to exacerbate prior injuries, which then become chronic, debilitating painful arthritis that progresses to degenerative joint disease, which ultimately cripples and maims elephants. **Bunny displayed a reduced range of motion in her right front carpus or wrist most likely due to painful arthritis which is now being enhanced and exacerbated under her current standard of care from repetitive motion and joint-stressing, non-species typical behaviors.** A review of Libby and Bunny’s fast paced performances reveal repetitive counterclockwise movements and repetitive motion insult that stresses their limb joints.

**The stereotypic behavior that Libby exhibits is indicative that she suffers mentally, which manifests in repetitive swaying behavior.** This abnormal behavior is well documented in captive and performing elephants. In my experience and that of others reported in the scientific literature stereotypic behavior is generally interpreted as repetitive, meaningless behavior induced by frustration, particularly among animals given inadequate mental stimulation in an attempt to cope. Stereotypic behavior in elephants is not part of their natural species typical behaviors exhibited in the wild. Recent studies have concluded this behavior is

an important indicator of compromised welfare.<sup>17</sup>

There is a general consensus in the relevant veterinary scientific community that lack of exercise, long hours standing on hard substrates, and contamination resulting from standing in their own excreta are major contributors to elephant foot problems. This general opinion is documented in the introduction to the veterinary text, *The Elephant's Foot, Prevention and Care of Foot Conditions in Captive Asian and African Elephants* (Csuti, 2001),<sup>1</sup> which is based upon information presented at the First North American Conference on Elephant Foot Care and Pathology held in March, 1998.

The abnormalities documented on Libby and Bunny's left front toes are representative of their current and historical standard of care. A review of their travel schedule prior to their two performances or shows in Westcliffe on June 16th indicate the Garden Bros Circus appeared on June 1<sup>st</sup> in Rochester, MN (two shows), Sauk Rapids, MN (two shows), Red Wing, MN (two shows), Brookings, SD (two shows), Mitchell, SD (two shows), Merville, IA (two shows), Omaha, NE (three shows), Lincoln, NE (two shows), Independence, MO (two shows), and Topeka, KS (two shows). Immediately following the two shows in Westcliffe, the circus traveled to Loveland, CO (six shows), Mitchell, NE (two shows), Kremmling, CO (two shows), Cheyenne, WY (two shows), Tremonton, UT (two shows), West Valley, UT (five shows), Orem, UT (four shows), Mt Pleasant, UT (two shows), Cedar City, UT (two shows), Logandale, NV (two shows), and on July 1<sup>st</sup> Kingman, AZ (three shows). Thus over a fifteen day period prior to performing twice in Westcliffe Libby and Bunny will have performed twenty-one times, and following Westcliffe over a fifteen day period thru July 1<sup>st</sup> will have performed thirty-two more times, a total of fifty-five shows in thirty-one days traveling through twenty-one cities in nine states.

In a federal court case a review the circus elephants' medical and husbandry records revealed the elephants could not be made to perform without being dominated by trainers using bullhooks and being chained in severely restricted spaces on unyielding surfaces for prolonged periods.<sup>2</sup> As a result, the evidence revealed the elephants endured chronic physical suffering and psychological deterioration.

Veterinarians and enlightened elephant managers are no longer clinging to the old industry standards. An illustration of this trend is found in the second Animal Welfare Principle of the AVMA: **Decisions regarding animal care, use, and welfare shall be made by balancing scientific knowledge and professional judgment with consideration of ethical and societal values.** The United States Department of Agriculture-Animal Plant Health Inspection Service (USDA-APHIS) National Veterinary Accreditation Program Supplemental Training Module 22: Animal Welfare: An Introduction (Content Finalized September 2012) discusses animal welfare as being "A Changing Landscape,"<sup>19</sup> and that "Animal welfare has attracted increasing attention in recent years. Practices for the acquisition, production, and care of animals used in agriculture, biomedical research, teaching, exhibition, entertainment, and companionship have changed." In addition "The public expects a veterinarian to understand and to be able to

explain what is necessary for the well-being of all animals.”

In defining animal welfare Training Module 22 states “It is difficult to identify a single, universally agreed-upon definition of animal welfare; however, many individuals and organizations have crafted definitions that share certain commonalities including:

- Welfare is the state of the animal, and how it is coping with the conditions in which it lives.
- An animal’s welfare can range from negative to positive.
- A complete assessment of welfare requires consideration of multiple facets of the animal’s state.”

Further “An unbiased and thorough assessment of an animal’s state should be encouraged regardless of its species, role or utility. While the goal may be to classify welfare as good or/bad or acceptable/unacceptable, it will always involve considering different information often with ethical components.” And “As stated by the American Veterinary Medical Association, animal welfare means how an animal is coping with the conditions in which it lives. While practical considerations may sometimes limit steps that can be taken to improve an animal’s welfare, these considerations **should not** impact the assessment of the animal’s welfare state.”

**Opinion- Both Libby and Bunny demonstrated rote non-species typical behaviors during their performances, suffer physical injuries, inhabit intolerably restricted spaces and are subjected to a travel and work schedule that is inhumane by any standard.** Libby suffers mentally, which manifests in stereotypic swaying behavior which is an important indicator of compromised welfare. Libby and Bunny are forced to perform non-species typical behaviors, and Bunny provide rides that are both repetitive and cumulatively injurious enforced with a bullhook.

Libby and Bunny are an endangered species; and, based upon observations made during the appearances of the Garden Bros Circus in Westcliffe, Colorado, **Asian elephants Libby and Bunny are being harassed both physically and psychologically. The conditions under which they are being managed creates the likelihood of increased physical injury. They suffer harassment. Their natural behavior as elephants is disrupted to the point where they experience permanent harm.** During their rote performances both Libby and Bunny appeared expressionless, dazed, non-exploratory, and indifferent to their surrounding while demonstrating near expressionless behavior.

## References:

1. Csuti, B., Sargent, E.L., and Bechert, U.S. eds. 2001. The Elephant's Foot, Prevention and care of foot conditions in captive Asian and African elephants. Iowa State University Press.
2. Ensley, P.K. 2008. Expert Report. Civ. No. 03-2006 (D.D.C.) American Society For the Prevention of Cruelty to Animals, et al. v. Ringling Brothers and Barnum & Bailey Circus, et al.
3. Ensley, P.K. 2012 Declaration, Deposition, and Testimony. Superior Court of the State of California for the County of Los Angeles, Department 50. Aaron Leider VS. John Lewis, City of Los Angeles, and Does 1 through 50. NO. BC375234.
4. Ensley, P.K. 2012. Report to Determine Physical Condition and Suitability to Perform Following Inspection of Ringling Brothers and Barnum & Bailey Circus (RBBBC) at the Los Angeles Staples Center the Week of July 11-17, 2012. Report requested by the Department of Animal Services of the City of Los Angeles, 221 North Figueroa Street, Fifth Floor, Los Angeles, California 90012.
5. Ensley, P.K. 2014. City of Los Angeles, California TASK ORDER SOLICITATION May 15, 2014. Animal Permit Related Inspection Services for the Ringling Bros. And Barnum & Bailey Circus (RBBBC) from July 9, 2014 to July 15, 2014. Report requested by the Department of Animal Services of the City of Los Angeles, 221 North Figueroa Street, Fifth Floor, Los Angeles, California 90012.
6. Ensley, P.K. 2015. Animal Welfare Inspection Report on Performing Animals at the UniverSoul Circus in Atlanta, Georgia from February 4, 2015 – March 1, 2015 focusing on Three Asian Elephants (*Elephas maximus*), Four Tigers and a Cougar (*Felis concolor*) for Fulton County Animal Services Managed by LifeLine Animal Project. Report requested by Fulton County Animal Services Managed by Lifeline Animal Project.
7. Ensley, P.K. May 8, 2015. Observations of Ringling Brothers and Barnum & Bailey Circus Production in Atlanta, Georgia Philips Arena February 11-13, 2015 Focusing on Six Asian Elephants (*Elephas maximus*) to Include Inspection Recommendations for a Meaningful Health Assessment of Performing Elephants. Report requested by Fulton County Animal Services Managed by Lifeline Animal Project.

8. Ensley, P.K. 1996 Opinion and Deposition on the Alleged Abuse of African Elephant, Tyke. Kurtes Quesinberry, Janet Yocum, and Gwenn G.W. Nordahl, Plaintiffs, vs. John F. Cuneo, Jr.; The Hawthorn Group, et. al. Defendants. Civil No. 94-4783-12.
9. Ensley, P.K. 2000. Opinion on Portland Zoo/Alleged Abuse of Elephant (Rose Tu) by Keeper Case #00-66799. Animal Legal Defense Fund and Deputy District Attorney Portland, Oregon.
10. Ensley, P.K. 2000. Review of evidence and an opinion regarding alleged abuse of Elephants. Ringling Bros. Barnum and Bailey Circus - San Jose Arena-HSSCV Case #A99-015840 District Attorney Santa Clara County San Jose, CA.
11. Ensley, P.K. 2010 Review of evidence and affidavit regarding whether the Asian elephant named Lucy is in distress at the Valley Zoo in Edmonton, Alberta, Canada. In the Court of Queen's Bench of Alberta, Judicial District of Edmonton between Tove Reece, Zoocheck Canada Inc. and People for the Ethical Treatment of Animals Inc. and City of Edmonton.
12. Ensley, P.K. 2014. Assessment and Opinion Concerning the African Elephant "Nosey". Report requested by the PETA Foundation.
13. Ensley, P.K. 2005 Review of evidence and expert witness in a case of alleged animal abuse of tiger cubs. The People Of The State Of California, County Of Riverside Vs. John Hans Weinhardt/Marla Jean Smith, Court Number RIF110175. District Attorney Riverside, CA 92501.
14. Ensley, P.K. 2016. Declaration regards whether a giraffe has been caused to be in distress, undergoing pain, and unnecessary suffering and abuse, from being shot at and subjected to the sounds of a BB gun fired at close range as described in two signed declarations executed in Toronto, Ontario.
15. Ensley, P.K. 2016. Declaration regards a video review titled: "2015-12-11\_V07\_Whipping\_MAH05300.MP4" (Tiger at Bowmanville Zoological Park. Ontario, Canada.).
16. Ensley, P.K. Ensley. 2017. Preliminary Assessment of the Living Conditions of Two Male Mountain Lions (*Felis concolor*) and Two Female Black Bear (*Ursus americanus*) During a Visit to the Spring River Park & Zoo in Roswell, New Mexico.

17. Greco, B.J. Meehan, C.L. Hogan, J.N., Leighty, K.A., Mason, G.J., & Mench, J.A. 2016. The Days and Nights of Zoo Elephants: Using Epidemiology to Better Understand Stereotypic Behavior of African Elephants (*Loxodonta africana*) and Asian Elephants (*Elephas maximus*) in North American Zoos. PLOS.
18. Priest, Gary M. 1999. Animal behavior management at the san diego wild animal park. In: Ramirez, K. ed. Animal Training. Shedd Aquarium, Chicago, ILL. pp. 405-406.
19. USDA-APHIS. 2012. National Veterinary Accreditation Program Supplemental Training Module Completion Certificate. Module 22: Animal welfare: An Introduction.
20. West, G. 2006. Musculoskeletal System. In: Fowler, M.E. and Mikota, S.K. Biology, Medicine, and Surgery of Elephants. Blackwell Publishing. p. 266.
21. Wallach, J.D. and Boever, W.J. 1983. *Perissodactyla* (equids, tapirs, rhinos), *proboscidae* elephants), and *hippopotami* (hippopotamus). In: Diseases of Exotic Animals. W.B. Saunders pp. 761-829.