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Professional Veterinary Opinion Based on a Review of Medical Records for the Asian Elephants, Emily and Ruth, at the Buttonwood Park Zoo in New Bedford, MA.

Introduction:

I have never visited the Buttonwood Park Zoo nor have I physically examined Emily and Ruth. I base my professional opinion solely on the records provided to me by In Defense of Animals, obtained through Massachusetts open records law, which include the following files, as well as my professional expertise:

- MEDICAL RECORDS EMILY (#4), a .pdf file including a Specimen Report, MedARKS files, and assorted lab results. 45 pages covering approximately the last five years.
- MEDICAL RECORDS RUTH (#5), a .pdf file including a Specimen Report, MedARKS files, and assorted lab results. 64 pages covering approximately the last five years.
- FOOT CARE LOGS EMILY & RUTH, a .pdf file of scanned foot care logs numbering 147 pages (although pages 51 through 115 were illegible) consisting of a standard form with illustrated elephant feet. Foot care issues and care were logged for the period 3Feb2008 through 5Oct2010.
- BPZ MANAGEMENT POLICY & ELEPHANT PROFILES, a 77 page Elephant Management Policy and Elephant Keeper Handbook, including Elephant profiles with Keeper Incident Reports, pages 25-41.
- http://www.youtube.com/watch?v=4Lw-HrphMhg&feature=mfu_in_order&list=UL A short video (1 minute & 24 seconds) of Ruth walking in her yard dated November, 2009.
- As well as the video of Emily walking in her yard in summer 2008, 2 minutes & 44 seconds. <http://www.youtube.com/watch?v=RY8HwTXmG1U&feature=related>.

Findings & Observations:

Emily. She is a 46-year-old female Asian elephant, *Elaphas maximus*, who is generally in “good health.” (page 25 of BPZ Elephant Management Policy). And while I agree that the medical records support this assessment, she is not without medical issues. Her foot pathology outlined in the Foot Care Logs includes the following:

- Page 2 – 2/3/2008, fistula opened from nail to sole between #3 & #4 on Right Fore Foot (RFF) and separation of cuticle Left Hind Foot (LHF) #4 nail.
- Page 3 – 2/5/2008, opened #4 nail on LHF to expose necrotic tissue.

- Page 5 – 2/17/2008, Fistula sole through nail #2 LFF. Et cetera and continuing through to this year.
- Page 129 – 3/24/2010, LHF, abscess drained outside nail #5.

The video of Emily taken in summer 2008 demonstrates an adequate Range-of-Motion (ROM) of her joints indicating little visible joint issues (such as arthritis) at that time and apparently non-painful soles and nails. But page 7 of the Medical records indicates a keeper reported a front left wrist swollen on 22Oct2009, which would indicate some arthritic issues developing. In November 2007, records indicate a problem with tenderness of the left rear foot sole due to “urine scald or moist floors. This has occurred in the past.” (page 5). Clearly someone at the zoo is aware that her foot problems are a management or facility issue. (See reference below to *The Elephant’s Foot*).

Her other long-term problem is her “persistent pressure sore on left hip.” (page 5 of Medical Record 10Apr2008). The zoo places the blame squarely on Emily’s shoulders for this nagging problem on Page 25 of the BPZ Elephant Management Policy: “She chooses to lie down only on her left side and as a result has a chronic hip sore.” These pressure sores are common in zoo and circus elephants, forced to lie down on unnatural substrates often in their own urine and/or feces. (I dare say wild elephants must choose to lie down on the left or right side without the risk of pressure sores.) The sores are a factor of her massive weight on an unnaturally hard surface, not her choice, since Emily has little choice where she lays down.

Emily’s records indicate aggression toward Ruth 11 times from January 2005 until October 2010, including an episode on 14Jun2006 where Emily bit off 6.5 inches of Ruth’s tail (page 3 of medical Record). This required several veterinary treatments to resolve the wound. What is evident from the record is that Emily and Ruth are at best tolerating each other most of the time. They are essentially living in a dysfunctional elephant family. The BPZ Elephant Management Protocol Handbook states on page 26: “This elephant does not interact well with other dominant cows. She either does not recognize or chooses not to exhibit appropriate behavioral responses in a herd setting.” Although I cannot determine from the records how this evaluation was made (previous zoo history?) Bringing in another cow (as I am told is being considered) may only exacerbate these problems, and it still does not constitute a social group of adequate size and composition for the species.

Ruth. She is a 52-year-old female Asian elephant with chronic foot disease and severe arthritis in especially her front legs. I base this assessment upon the video of her walking across her exhibit yard in the YouTube video dated November, 2009 (see link above) as well as the preponderance of evidence in her medical records:

- 8/3/2005 – elephant still limping on right front foot.
- 12/20/2005 – Keepers report abscess found in nail/pad of right front foot...
- 1/20/2006 – Keepers noted a decrease in pad thickness...pad is soft and spongy...
- 4/3/2006 – Trimmed 3rd digit of left front foot to expose necrotic tissue.
- 7/1/2006 – LFF, nail trimmed and area of abscess debrided.

- 12/6/2006 – Area between #2 & # 3 of LFF found soft spot, cleaned out.
- 12/15/2006 – Soft spot found on digit #4, cut back...
- 2/19/2007 – Slight sensitivity in Right Foot (Front or Rear?) mild swelling noted.
- 11/2/2007 – Interdigital lesion on LFF between #3 & #4.
- 1/26/2008 – Small pocket of black discharge (left foot, 4th digit), bruising...
- 3/27/2008 – Draining tract erupted LRF digit #4...Abscessation of nail beds noted.
- 4/10/2008 – LFF abscess erupted....
- 5/29/2009 – stiff on right front leg.
- 10/13/2009 – Swelling with decreased ROM of left wrist
- 1/19/2010 – Bleeding cuticles**
- 8/23/2010 – Bruising on RF pad.

The video reference above make obvious that Ruth is essentially crippled and the medical records point to the reason why.

As Dr. Murray Fowler states on page 3 of *The Elephant's Foot*, editors Csuti, et al, 2001, Iowa State University Press, Ames, Iowa: “The following are suggestions of predisposing factors leading to foot problems based on the author’s experience:

1. Lack of exercise.
2. Overgrowth of nail and/or sole.
3. Improper enclosure surface
4. Excess moisture.
5. Insufficient foot grooming.
6. Insanitary enclosures.

I suggest that the evidence from the zoo records indicates all or most of the above “predisposing factors” exist at Buttonwood Park Zoo. Two 15-minute walks per day are not sufficient to exercise an elephant (page 19 of BPZ Elephant Management Protocol). On pages 21 & 22 of *The Elephant's Foot*, Roodcroft and Oosterhuis point out that: “One to two hours of walking each day should be considered the minimum amount of time an elephant needs...” and “Unlike their wild counterparts, who tend to walk for up to 18 hours every day over different substrates, relatively sedentary captive elephants wear their pads down very little.” And as page 5 of Emily’s records demonstrates, excessive moisture and insanitary conditions have been implicated in foot problems at BPZ. Emily’s chronic pressure sores are a testament to “improper enclosure surface.” In my professional opinion proper foot grooming will not mitigate the other five factors above and the records indicate I am correct.

Conclusion:

Emily and Ruth are suffering from conditions inherent to turn of the century menagerie-style zoos, where animals are held on exhibit for the entertainment and curiosity of the public, with little thought given to the animals’ needs, including:

- Improper substrate and enclosure size necessary to meet the physical needs of elephants.

- A cold climate that exacerbates the insufficient conditions of the elephants' small enclosure. New Bedford, Mass., has a December-March daily average temperature well below 40 degrees Fahrenheit (<http://www.climate-charts.com/Locations/u/US72000001952461.php>), the temperature most zoos use to determine if elephants are allowed outside. Their records shed no light on how often they have access to the outside yard in inclement weather. However, recent first-hand reports indicate that the elephants may be outdoors only for short periods of time in temperatures below 40 degrees. This represents a very small portion of the elephants' 24-hour day. Elephants are naturally vigorous animals who are active for 18-20 hours a day. Spending the majority of their time in a barn, especially during the winter, is not sufficient for good health. A larger barn, as I understand is planned by the zoo, will not mitigate the damage to the feet and joints caused by the elephants being sedentary and unable to adequately exercise.
- Failure to meet Emily and Ruth's social and behavioral needs in their current situation. Videos of the two show them at opposite ends of the yard. The zoo's own Elephant Profiles (pages 25-28 BPZ Elephant Management Protocol) indicate the two elephants do not 'get along' so to speak. Emily prefers the keepers to Ruth. As I said above, a dysfunctional system. What we have is not an exhibit of an elephant family, we have two elephants tolerating each other and co-existing.

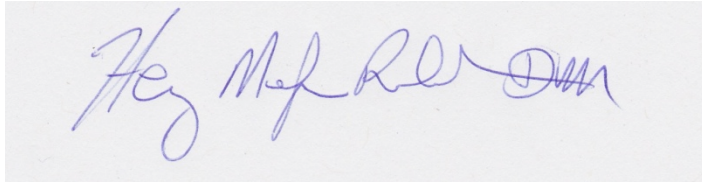
In closing, I think it is only a matter of time before Buttonwood Park Zoo will be forced to make a decision based on quality of life for Ruth. With her chronic severe foot disease and arthritis coupled with her being subjected to aggression from Emily, I can easily see the day when she will go down or be knocked down and be unable to rise. This may happen before a new exhibit can be constructed.

In the coming years, the condition of these elephants will continue to deteriorate. The investment of millions of dollars in an exhibit expansion will not change that. Emily and Ruth will continue to suffer from physical conditions that are very painful and ultimately debilitating, because they continue to be kept in the very conditions that caused these problems. Even in an expanded exhibit, you can expect to see similar problems in future elephants, especially due to the cold climate which greatly limits outdoor access and movement for at least a third of the year.

I am also disturbed that the records show that due to a budget hold, the zoo was unable to administer a necessary joint supplement to both of the elephants (21Aug09), resulting in front leg stiffness. Yet the zoo is planning to take on more expense and responsibility with an additional elephant in an expanded display that will require more resources to support. The zoo should also anticipate an increase in veterinary care and medications for both Emily and Ruth, as their conditions progress.

Finally, I would like to comment on the "punishment" used on Ruth for her incidents of aggression toward keepers. I am alarmed that this elephant has been struck on the front leg and foot, both being sensitive areas for her due to chronic health problems. She is also made to lie down as part of the punishment. For an elephant with Ruth's health issues, this can be painful and I would strongly recommend against it. I understand that the zoo would use the far more humane "protected

contact” management in a renovated exhibit. This begs the question: Why doesn’t the zoo use this method now?

A handwritten signature in blue ink that reads "Henry Melvyn Richardson, DVM". The signature is written in a cursive, flowing style.

Henry Melvyn Richardson, DVM

Qualifications: Having cared for captive wild and domestic animals, including elephants, for more than 40 years, the last 28 as a veterinarian, I feel eminently qualified to review medical records and formulate an opinion as to the health and welfare of elephants such as Emily and Ruth. During my career with captive animals I have cared for or consulted on more than 80 elephants, in zoos, drive-thru wild animal parks, circuses, and private owners. I have consulted in Columbia, Taiwan, South Korea, and Republic of the Congo, Rwanda, and Bolivia. I worked with the Elephant Sanctuary in Tennessee and with the Performing Animal Welfare Sanctuary in California, where I was veterinarian from 2007-2009. In 1982-1984 I provided veterinary care for 52 elephants at a drive-thru wild animal park in Grand Prairie, Texas, 44 of which were African orphans from the elephant culling operations in Zimbabwe. They were being broken and trained for the performing elephant business.