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**23 November 2019**

**ELEPHANT CONSULTATION REPORT**

FOR

**EDMONTON VALLEY ZOO  
EDMONTON, ALBERTA**

FOR

**FEMALE ASIAN ELEPHANT  
“SKANIK”  
(aka “LUCY”)**

ON

**16 September 2019**

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**MEDICAL/HUSBANDRY RECORD OF INSPECTION**

**EDMONTON VALLEY ZOO**  
**FEMALE ASIAN ELEPHANT**  
**“SKANIK” aka “LUCY”**



**EDMONTON, ALBERTA**  
**CANADA**

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**Date of Inspection:** 16 September 2019  
**Species:** Asian Elephant  
**Identification:** Female, “Skanik” aka “Lucy”, age 44 years  
**Date of Report:** 23 November 2019



## “Skanik” aka “Lucy”

### Introduction:

I examined the above elephant at the Edmonton Valley Zoo in Edmonton, Alberta, Canada on 16 September 2019. Present for the examination was Dr. Marie-Josée Limoges, Edmonton Valley Zoo’s Veterinarian and the Elephant Care Staff. This was my eleventh examination of Skanik, a 44 year old, female Asian Elephant, who is also known as Lucy, since 2002.

In July of 2002 the Zoo asked me to examine her and to evaluate the problems that she was having with her feet and to develop an action plan for her—which they followed and she returned to good health.

Then in September of 2009 I was asked to assess her overall health and to help them evaluate her respiratory problem that had recently developed and to examine a retained, deformed molar tooth.

In January of 2011 I was asked to be present for another exam of Lucy’s respiratory issues and to attempt to collect diagnostic samples.

My last exam of Lucy was done approximately 11 months ago on 5 November 2018.

This report is my written evaluation of her current condition as found by my exam done on the 16<sup>th</sup> of September 2019 and my recommendations for a continuing management plan for her.

### History:

Lucy has lived at the Valley Zoo in Edmonton, Alberta for 42 years. She came to the Zoo as a two year old orphan.

In 2002 when I first saw her, she had foot problems that were solved by changing their foot care program, adjusting her daily husbandry, increasing her exercise schedule and reducing her weight.

In 2009 I was asked to come to Edmonton to evaluate her for an abnormal molar tooth and a respiratory problem. The abnormal tooth had been shed by the time I arrived. At that time she was exercise intolerant to the point that she would have to breathe thru her mouth in order to catch her breath after a short walk. And when we explored her trunk with a 3 meter endoscope we discovered a narrowing of the nasal passages at the extent of the scope. A cause for the constrictions could not be determined because our view was obstructed by thick white exudate. It could not be determined if the tooth had any association with her respiratory problem. We determined at that time that her respiratory problem precluded her from being placed under any type of stressful situations, such as trying to move her to a different facility.

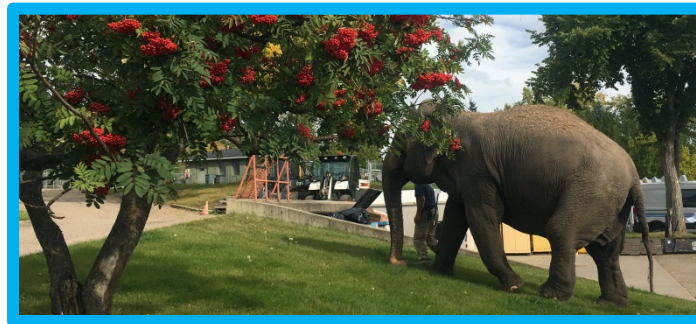
Since her respiratory difficulties continued, I was asked to be present for another exam by Dr. Milton Ness (former Edmonton Valley Zoo Veterinarian) and Dr. Jack Ingram (consulting Equine Veterinarian) on 31 January 2011. This exam revealed that her nasal constrictions continued, but the inflammatory process had diminished due to the treatment protocol that Dr. Ness had instituted.

In 2015, the Zoo requested that I come to Edmonton twice, once in the winter and once in the summer, to examine Lucy and to examine her condition in both cold and warm conditions and to evaluate her facilities and the staff’s management plan for her. Since then, I have examined Lucy each year.

**16 September 2019 Overall Findings:**

Lucy, as in past exams, is still a calm, gentle elephant that is managed in a “free contact” system. She is in good over-all body condition thanks to the Elephant Care Staff’s diligence in following the current plan for her. She is at a weight that has increased a bit since last year, but still has good flexibility as evidenced by her ability to get up and down with minimal effort. She still has some stiffness in her right carpus and left shoulder. Unfortunately, she still has a severe constriction of her nasal passages that affects her ability to breathe properly. The white exudate that was seen in 2009 continues to be greatly diminished. As before, she breathes thru her mouth, not her trunk, and if she walks too fast during her daily exercise, she has to stop and resort to extreme open mouth breathing to restore her oxygen deficit. This seems to have increased in the last year. Elephants are obligatory nasal breathers, so to see an elephant breathe through her mouth is quite alarming. Simply walking her around elicited the exaggerated open mouth breathing. She also has continued dental issues.

Current issues also include: vaginal discharge with odor & occasional blood (possible uterine leiomyomas); occasional signs of colic—stretching, yawning, rubbing abdomen; sleeping more—even on her left side, which is unusual, since she has previously favored sleeping on her right side.



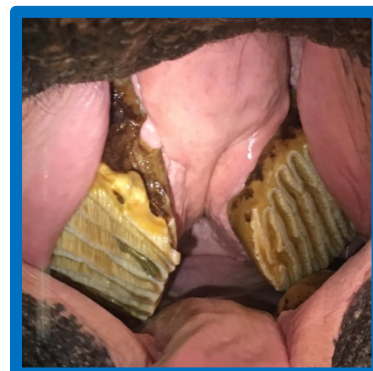
**Lucy Going out for a Walk**

**Oral Examination:**

On oral exam, she was noted to have a continuing deformity of both upper and lower molars. On this exam, the lower molars were not visualized. The right lower retained, deformed molar was shed this past summer, thanks to the efforts of the keepers. Now the left lower deformed molar is in a similar situation. Both upper molars are abnormal in position and wear surfaces and appear to be static since they have not advanced since the anterior upper molars were shed, and in fact may be her final set of upper molars.



2015



2019

**Lucy's Upper Molars**

**Exam of Feet:**

Examination of Lucy's feet reveals that she has had attentive care, as evidenced by her clean nails and the nice, well cared for cuticles. The staff should be commended for their efforts. She currently has a defect on her left front foot, nail #4. She also has a soft spot at the pad/nail junction on nail #3 of her right front foot.



**Lucy's Left Front #4 Nail and Foot Soaking**

**Evaluation of Lucy's Respiratory Problem:**

It appears at this time that all of Lucy's breathing occurs thru her mouth rather than her trunk. As in the past examinations of Lucy, after a short walk, she has to stop walking in order to "catch her breath". Elephants, being obligatory nasal breathers, should never have to breathe through their mouths. This indicates that she continues to have a constriction in her nasal passages, despite the greatly decreased nasal exudates seen. On this examination, it was noted that she has increased respiratory effort when lying down, also.



**Respiratory Difficulties While Walking and Lying Down**

**Facilities:**

Lucy's outside area consists of a large grass exhibit yard with a sand pile for resting, a pole structure, and shaded areas. She also has numerous exhibit enrichment items in her outside yard.

As part of the Plan for Lucy to increase her ability for exercise in the winter time, the Zoo built a 5,000 square foot heated building with a soft sand substrate several years ago. It continues to function well and is a great addition to the overall husbandry care of Lucy.

She will also go on daily walks in the Zoo with her keepers, weather permitting. The inside exhibit areas that are for public viewing, have a thick rubberized surface in the main viewing area and sand in the other areas. The rubber floor was recently redone, as well as the back alley in the inside area.

Also, in anticipation of an anesthetic procedure in the future to address her dental issues, they are in the process of engineering the installation an overhead gantry crane to assist Lucy during recovery from the anesthetic, if needed.



**Lucy's Outdoor Exercise Area**



**Lucy on a Walk in the Zoo**

**Treatments:**

Dr. Limoges currently has Lucy on a neurtaceutical and an anti-inflammatory medication for her joint issues. Lucy also gets an expectorant and an antihistamine for her respiratory problem, when needed. She is also being treated with physiotherapy, exercise and Class 3B Cold Light Laser treatments for her stiff left shoulder and right carpus. And they have continued her program of daily exercise for her overall general health.

I administered no medications during my inspection.

**Enrichment:**

As a solitary animal, the Elephant Staff have developed a program of enrichment for Lucy in lieu of another animal for her company. This includes the Keepers acting as her “herd mates”, providing physical items, as well as mental stimulation as part of her husbandry program. The keepers have even developed a game of “hide and seek” with Lucy, that stimulates her to “run to find” her keeper.



**Exercise and Enrichment**

**Weight Control:**

On this examination, it is noted that Lucy’s weight is still up a bit, with her current weight listed at 4,052 kg (8,915 lbs.). Even though she doesn’t look over weight, the scales tell the story, so the Elephant Care Staff will continue to concentrate on trimming her down, with a new Target Weight of 3,900 kg (8,580 lbs.). Keeping her weight near the Target Weight and the Exercise Program, have helped her to tolerate her respiratory problem. Reducing her weight will be the challenge for the Staff and will require strict adherence to her prescribed diet and frequent weights. Her good body condition is evidenced by comparing photos of her taken seventeen years ago in July of 2002 during my first exam and how she looks today.



**Lucy: 2002 vs 2019**

### **Staff Instructions:**

In my instructions to Staff, I reinforced the importance of movement, exercise and weight control in order for Lucy to better deal with her respiratory problem and any arthritic conditions that are present or may develop in the future. Feeding the prescribed diet is imperative, i.e. no food items that aren't on the approved diet list. She should continue to get tree branches to chew on and play with in order to see if we can get the potentially impacted left lower molar to loosen and exfoliate, like the right lower molar. I emphasized my concern for her dental issues. They will also continue to train her for trunk endoscopy without sedation and to commence training her for vaginal and rectal examinations in order to evaluate her for uterine pathology.

I commend the Elephant Care Staff on their dedication to give Lucy the best possible care that they can—both physical and mental. The Assessment section and the Proposed Plan section will detail my suggestions for the future.

### **Assessments:**

- Lucy's good nature and the ability of the handlers to work closely with her, continues to be the key to her ability to handle her respiratory condition.
- Short of bringing in another elephant or some other animal, the staff has maintained their status as Lucy's "herd" members.
- I did not observe any abnormal behaviors or signs of being stressed. The only time that she seems stressed is when she walks too fast and can't catch her breath due to her respiratory problem.
- Her respiratory problem continues to be serious. The continual presence of the exudate seen is problematic. Unfortunately, her current respiratory difficulties when lying down may indicate that her nasal constrictions are getting worse.
- Due to her breathing problems, stress or excessive exercise needs to be minimized. At the same time, **her controlled exercise program must be continued.**
- Lucy's weight has increased a bit and must be reduced over the next 12 months to her new Target Weight of 3,900 kg (8,580 lbs.).
- The keepers are taking good care of Lucy's feet with their current foot care program. Currently, her feet are in good shape. Her past nail defects will probably recur in the future, despite the efforts by the Staff, as they do in many older Asian elephants, and quite probably will never completely disappear.
- Lucy's upper molars are deformed with abnormal wear surfaces. Both incoming lower molars were impacted and were starting to deform due to retained anterior lower molars. The keepers were able to get the lower right impacted molar out this past summer, just before we were going to perform an anesthetic procedure to remove the molar surgically. The left lower molar continues to be retained, which may result in the need for an anesthetic procedure in order to remove it, which would allow the incoming molar to advance normally. Her dental issues are an issue that needs to be addressed with Staff.
- As difficult and risky as it may be, due to her respiratory problem, we may have to consider an anesthetic procedure in the near future to surgically remove the retained lower right molar and to try to re-shape the upper molars.
- The padding over the concrete floor of the indoor facilities continues to greatly reduce the abnormal pressures on Lucy's feet in the winter months. The additional sand area has worked out well, also.
- Overall, Lucy appears to be calm and well-adjusted in her current situation and is in good general condition for a 44 year old female Asian elephant, thanks to the care she gets from the Edmonton Valley Zoo elephant staff.
- Her respiratory problem continues to be a severe problem that precludes placing her in any stressful situations, such as trying to move her to a different facility. She appears to be comfortable in her current surroundings, and is well cared for by her care takers.



**Proposed Plan:**

- **Respiratory Problem:**
  - Continue to treat this as a medical problem, for now.
  - Continue periodic courses of antibiotics and anti-inflammatories as necessary to control the nasal exudate.
  - Repeat the endoscopic exam, under standing sedation, or train her to accept the scoping without sedation, once or twice a year.
  - Maintain Lucy at the zoo due to her medical issues.
- **Weight Maintenance:**
  - Evaluate the current prescribed diet and feeding protocols to see if it can be determined why her weight has crept up recently. Make corrections as necessary in order to get her back to her Target Weight of 3,900 kg (8,580 lbs.) over the next 12 months.
  - Continue her exercise program—with care not to over-stress her.
- **Foot Care:**
  - The Elephant Staff should continue their good foot care practices, paying special attention to the cuticles of her left front foot and the chronic soft spot on nail #3.
  - Periodic radiographs of her feet should be taken to monitor any arthritic changes that might develop.
- **Exercise:**
  - Continue Lucy’s exercise program despite her respiratory problem.
  - Be attentive to her need to catch her breath and if she has trouble doing so, discontinue the exercise session.
- **Periodic Mild Colic:**
  - Desensitize Lucy to rectal and vaginal palpation, so ultrasound can be done to evaluate her uterus for possible leiomyoma tumors, which can cause pain and colic signs.
  - Perform monthly fecal evaluations for Occult Blood, which may indicate the presence of a gastric ulcer from the medications that she is on.
- **Dental Care Issues:**
  - Train Lucy to open her mouth wider for better examination and photographs and videos of her upper and lower molars in order to better monitor their status.
  - Try to desensitize her to the use of a power dental float to re-shape her upper molars.
  - Continue to provide her with large branches to chew on to apply pressure to the impacted lower left molar.
  - Attempt to loosen the retained left lower molar with a specially designed “crow bar” type tool.
  - Start discussing the need for an anesthetic procedure to better evaluate her dental issues and come up with a plan of action that takes into account the added concerns for anesthetizing an elephant that has respiratory issues due to nasal constrictions.

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**End of Report**

**James E. Oosterhuis, DVM  
Veterinary Consulting Services  
23 November 2019**