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1 April 2015

ELEPHANT CONSULTATION REPORT

FOR

**EDMONTON VALLEY ZOO
EDMONTON, ALBERTA**

FOR

**FEMALE ASIAN ELEPHANT
"SKANIK"
(aka "LUCY")**

ON

23 March 2015

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MEDICAL/HUSBANDRY RECORD OF INSPECTION

**EDMONTON VALLEY ZOO
FEMALE ASIAN ELEPHANT
"SKANIK" aka "LUCY"**



**EDMONTON, ALBERTA
CANADA**

Date of Inspection: 23 March 2015
Species: Asian Elephant
Identification: Female, "Skanik" aka "Lucy", age 39 years
Date of Report: 1 April 2015



“Skanik” aka “Lucy”

Introduction:

I examined the above elephant at the Valley Zoo in Edmonton, Alberta, Canada on 23 March 2015. Present for the examination was Dr. Marie-Josée Limoges, Edmonton Valley Zoo’s Veterinarian and the Elephant Care Staff. This was my seventh examination of Skanik, a 39 year old female Asian Elephant, who is also known as Lucy.

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 and a retained, deformed molar tooth. (The tooth was shed before I arrived for that inspection).

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

My last exam of Lucy was done approximately one year ago on 24 February 2014.

This report is my written evaluation of her current condition as found by my exam done on 23 March 2015 and my recommendations for a continuing management plan for her.

History:

Lucy has lived at the Valley Zoo in Edmonton, Alberta for 37 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 adjusting her husbandry program, 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 respiratory problems. 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 in both nostrils. 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. Ness and Dr. Jack Ingram, Equine Specialist on 31 January 11. This exam revealed that her nasal constrictions continued, but the inflammatory process had diminished due to the treatment protocol that Dr. Ness had instituted.

This year, the Zoo requested that I come to Edmonton again to examine Lucy and to examine her current condition and to evaluate her facilities and the staff’s management plan for her.

March 2015 Overall Findings:

Lucy, as in past exams, is still a calm, gentle elephant that is managed in a “free contact” system. She is in excellent over-all condition thanks to the Elephant Care Staff’s diligence in following the current plan for her. Unfortunately, it seems that she has gained about 150 kg (~300 lbs) since my last exam on 24 Feb 2014. But she still has good flexibility as evidenced by her ability to get up and down without effort. As previously noted, she has some conformational defects that include both front legs being bow legged and pigeon toed and the rear feet being somewhat pigeon toed. Also, she still has some stiffness in her left shoulder and right carpus. She still has a severe constriction of her nasal passages that affects her ability to breathe properly, however. The white exudates that were seen in 2009 continue to be greatly diminished. As before, if she walks too fast during her daily exercise, she has to open mouth breathe to restore her oxygen deficit. Her feet are in good condition. She has one pad/nail defect at this time that is being managed by the keepers as part of their foot care program. On oral exam, she was noted to continue to have a deformity developing with her upper molars and probably with her lower molars.

Oral Examination:

The site where the deformed right upper molar was shed in 2009 was visualized and it appears that the next molar is coming in slower than I would like. The same thing is true for the upper left molar, where the retained molar was finally shed this past year. The concern at this time is what do the lower molars look like and are they deformed as well. On close evaluation of the photographs, it is noted that the right upper molar is developing an abnormal wearing surface.



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. However, due to the previously mentioned conformation issues, she has a pad/nail defect in the #2 nail on her Right Front foot. This problem will probably be a continuing issue that will be controlled by the excellent foot care program that the staff has in place. Her rear feet are in excellent shape, with no other defects found.

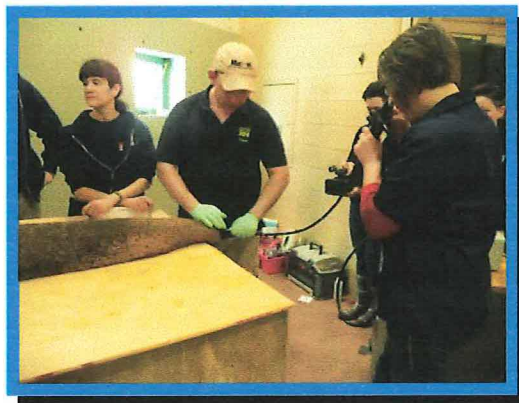
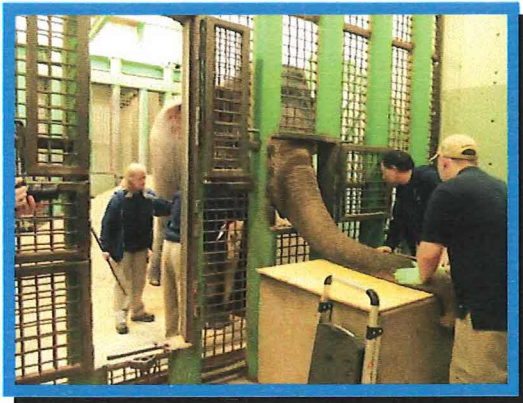


Lucy's Right Front #2 Nail Defect

Evaluation of Lucy's Respiratory Problem:

As in the past examinations of Lucy, after a short walk, she has to breathe through her mouth 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. This may indicate that her nasal problem is getting worse.

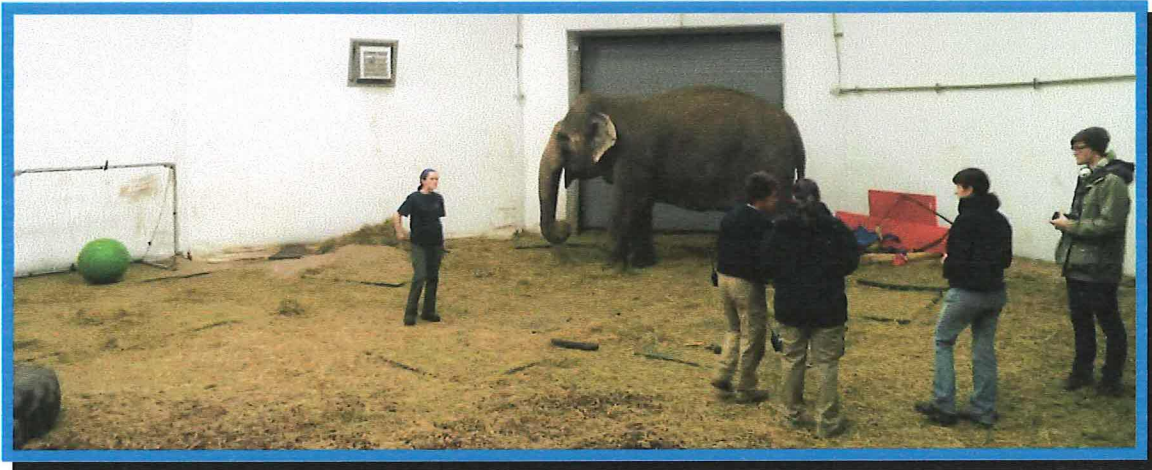
On this exam, we examined Lucy's nasal passages with a 3 meter endoscope after a standing sedation was administered to Lucy by Dr. Limoges. At 1.5 meters into her right nostril, she was noted to have some hyperemic (red) spots in the mucosa, and at 2.45 meters she only had a tight slit to breathe through. In her left nostril, the red spots were seen at the 2 meter depth and then again the tight slit at about 2.6 meters. Very little mucous was visualized during this examination.



Scoping Lucy's Trunk

Facilities:

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, approximately 2 years ago, with a soft sand substrate. It continues to function well and is a great addition to the overall husbandry care of Lucy. During the winter months, Lucy is also allowed outside when the weather is suitable, according to their previously set temperature limits. She will also go on 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 has held up well and except for some seam staining is still intact. For the summer time, the outside area consists of a large grassed exhibit yard with a dirt surface/sand area, a pole structure and shaded areas.



The Heated Inside Exercise Facility



Original Indoor Facility with Rubber Floor and Public Viewing

Treatments:

Dr. Limoges has Lucy on several different medications to try to reduce the amount of mucous that is produced in her nasal passages and to try to decrease any tissue swelling that may be causing the strictures of her nostrils. She has also been treating her stiff left shoulder with physiotherapy, exercise and Class 3B Cold Light Laser treatments. And they have continued her program of daily exercise.

I administered no medications during my inspection.



Daily Exercise Program

Enrichment:

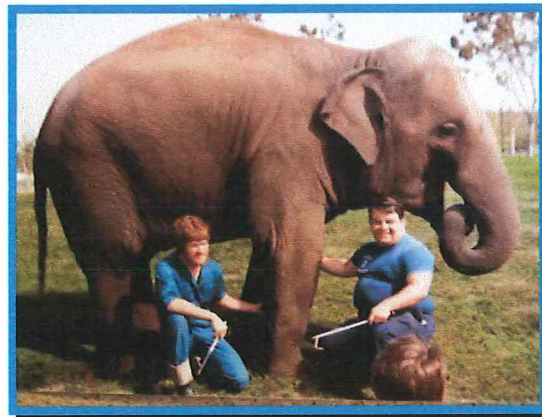
As a solitary animal, the Elephant Staff have developed a program of enrichment for Lucy in lieu of another animal for her company. This includes the Keepers acting as her “herd mates”, providing physical activity items, as well as mental stimulation.



Enrichment Program

Weight Control:

On this examination, it is noted that Lucy's weight has crept up a bit, with her current weight listed at 4,400 kg (8,800 lbs). Even though she doesn't look over weight, the scales tell the story, so the Elephant Care Staff will concentrate on trimming her down, with a Target Weight of 3,800 kg (8,400 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 thirteen years ago in July of 2002 during my first exam and how she looks today.



Skanik: 2002 vs 2015 and as a Juvenile

Staff Instructions:

In my instructions to Staff, I reinforced the importance of movement, exercise and weight control in order for Lucy to 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.

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



Assessments:

- Lucy's good nature and the ability of the handlers to work closely with her continue to be the keys 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 if she walks too fast and can't catch her breath due to her respiratory problem.
- Her respiratory problem continues to be serious. The continual reduction of the exudate seen is encouraging. 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 is a bit overweight at this time. She should weigh between 3,700 to 3,800 kg (~8,100 to 8,400 lbs)
- The keepers are taking good care of Lucy's feet with their current foot care program. Her current nail defect will probably continue to be problematic, as they are in many older Asian elephants, and quite probably will never completely disappear.
- Lucy's lower molars need to be better evaluated.
- The 5,000 sq ft heated indoor exercise facility allows for maintaining Lucy's exercise program throughout the year.
- 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 39 year old female Asian elephant, thanks to the care she gets from the Edmonton Valley Zoo elephant staff.
- However, her respiratory problem continues to be a severe problem that precludes placing her in any stressful situations, such as putting her through the rigors of a move to another facility.

Proposed Plan:

- **Respiratory Problem:**
 - Continue to treat this as a medical problem, for now.
 - Consider approaching the universities “bio-medical” engineers for help in developing biopsy instruments capable of collecting a tissue sample from an elephant.
 - Continue periodic courses of antibiotics and anti-inflammatories as necessary to control the nasal exudates.
 - Repeat the endoscopic exam, under standing sedation, in August or September of this year to see if it can be determined if the constriction of her nasal passages has progressed.
- **Weight Maintenance:**
 - Evaluate the current prescribed diet to try to determine how she gained the added kilograms since my last visit—her weight range should be between 3,700 to 3,800 kg (8,100 to 8,400 lbs).
 - Continue her exercise program—with care not to over-stress her to the point that she has to stop to catch her breath.
- **Foot Care:**
 - The Elephant Staff should continue their good foot care practices.
 - Periodic radiographs of her feet should be taken to monitor any arthritic changes.
- **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.
- **Dental Care:**
 - Train Lucy to open her mouth wider for better examination and photographs of her lower molars in order to monitor to try to determine their status, especially since the upper molars are developing abnormal wear surfaced.

End of Report



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1 April 2015