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**1 May 2013**

**ELEPHANT CONSULTATION REPORT**

FOR

**EDMONTON VALLEY ZOO  
EDMONTON, ALBERTA**

FOR

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

ON

**4 February 2013**

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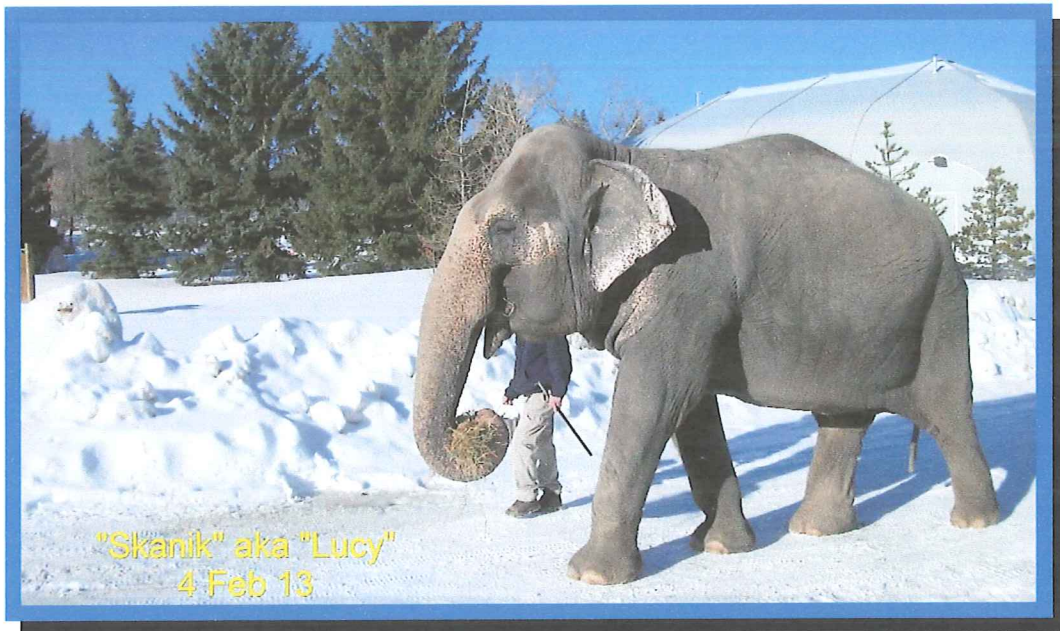
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**MEDICAL/HUSBANDRY RECORD OF INSPECTION**

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



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

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**Date of Inspection:** 4 February 2013  
**Species:** Asian Elephant  
**Identification:** Female, “Skanik” aka “Lucy”, age 37 years  
**Date of Report:** 1 May 2013



## “Skanik” aka “Lucy”

### Introduction:

I examined the above elephant at the Valley Zoo in Edmonton, Alberta, Canada on 4 February 2013. Present for the examination was: Dr. Milton Ness, Valley Zoo’s Veterinarian and the Elephant Care Staff. This was my fifth examination of Skanik, a 37 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).

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 20 February 2012.

This report is my written evaluation of her current condition as found by my exam done on the 4<sup>th</sup> of February 2013 and my recommendations for a continuing management plan for her.

### History:

Skanik has lived at the Valley Zoo in Edmonton, Alberta for 35 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. 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. Ingram 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 Skanik and to examine her current condition and to evaluate her facilities and the staff’s management plan for her.

**2013 Overall Findings:**

Skanik, 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. She is at an ideal weight at this time and has good flexibility as evidenced by her ability to get up and down without 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 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 three pad/nail defects that are being managed by the keepers as part of their foot care program. On oral exam, she was noted to have a deformity developing with her left upper molar.

**General and Oral Examinations:**

On first impression, Skanik appears healthy and at a good body weight for her. She has relatively good movement while walking and is calm and gentle.

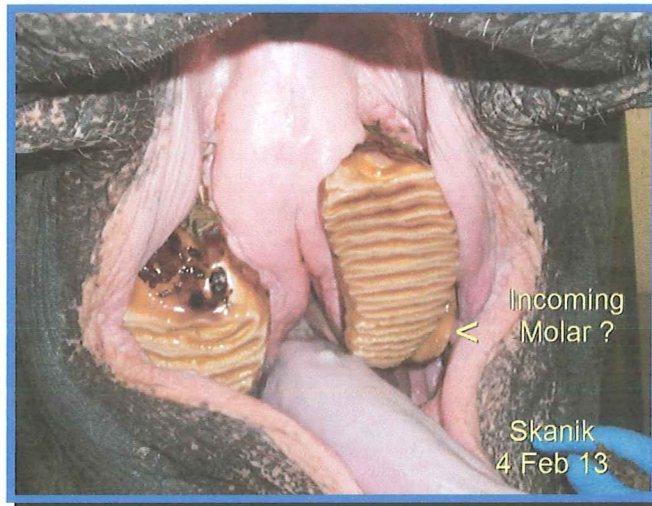
On closer inspection, however, it is noted again that when she walks she has to periodically open mouth breathe in order to get enough air into her lungs. Elephants are obligatory nasal breathers, so to see an elephant breathe through her mouth is quite alarming. Simply walking her around elicited the open mouth breathing.



**Lucy Exercising**

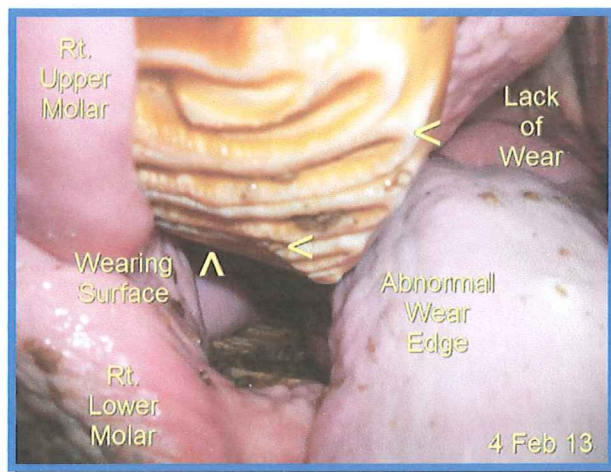
As previously noted, she has some conformational defects that include both front legs being bow legged and pigeon toed and the rear feet being somewhat pigeon toed. Also, she still has some stiffness in her left shoulder and right carpus. She is in good body condition at this time, and should be maintained at this weight. Her current weight control program should continue.

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. Also, the left upper molar continues to appear to be crowding the center line and may be deforming a bit more since my last visit in 2012. It was also discovered that the edge of an incoming molar or a deformity of the existing molar is developing on the posterior buccal side of the tooth.



**Skunik's Left Upper Molar Crowding the Center Line With Incoming Molar Noted**

On this exam, the lower molars were briefly visualized and appear to be normal in appearance. However, on close evaluation of the photographs, it is noted that the right upper molar is developing an abnormal wearing surface.



**Skunik's Upper Right Molar With an Abnormal Wearing Surface**

Examining her body revealed no problems other than an old scar on her right hip and a small sore spot on her right elbow. She also has a crooked tail with no tail hairs.



“Skanik” aka “Lucy”

**Exam of Feet:**

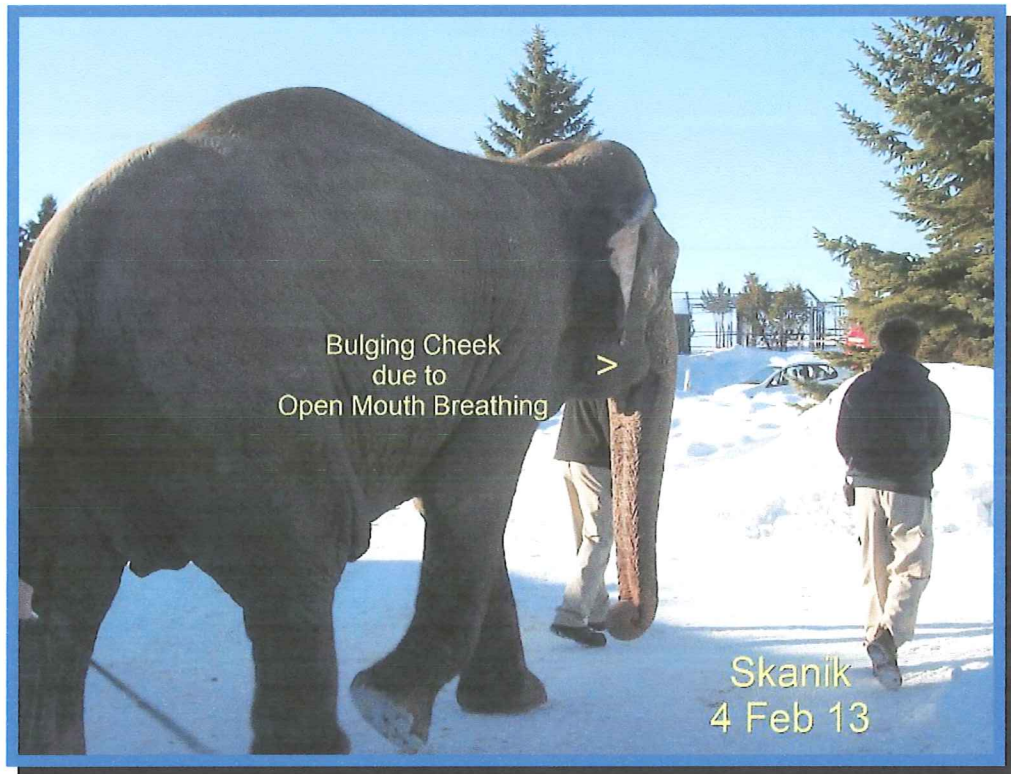
Examination of Skanik’s feet reveals that she has had attentive care, as evidenced by her clean nails and the nice, well cared for cuticles. The staff should be commended for their efforts. However, due to the previously mentioned conformation issues, she has a pad/nail defect in the #3 nail on her Right Front foot. She also has defects in her #4 and #5 nails on her Left Front foot. These problems will probably be continuing issues that will be controlled by the excellent foot care program that the staff has in place. Her rear feet are in good shape, with no defects found.



**Skanik’s Defects Involving Her Front Feet**

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

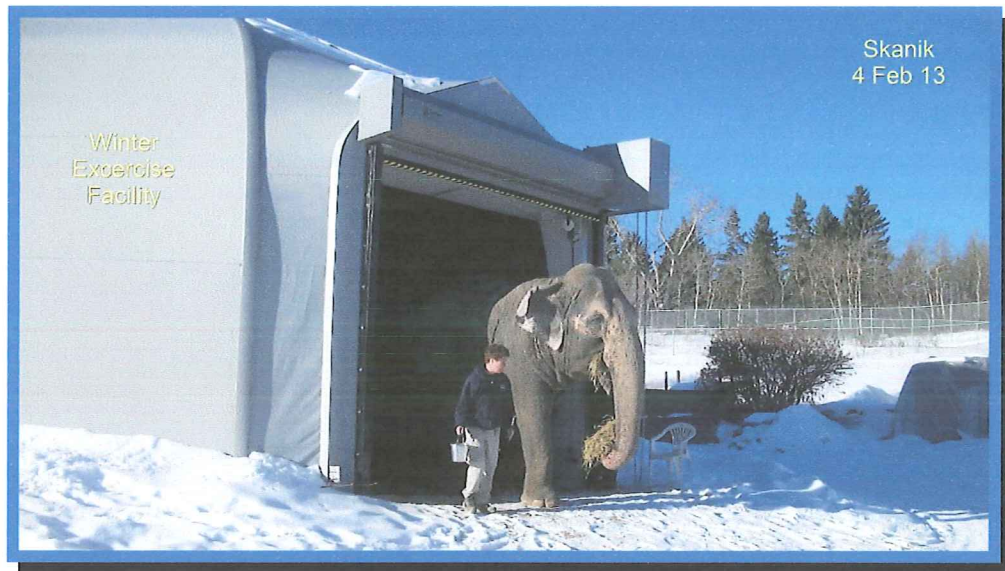
As in the past examinations of Skanik, after a short walk, she had to breathe through her mouth in order to "catch her breath". Elephants, being obligatory nasal breathers, should never have to breathe through their mouths. This indicates that she continues to have a constriction in her nasal passages, 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 may be getting worse.



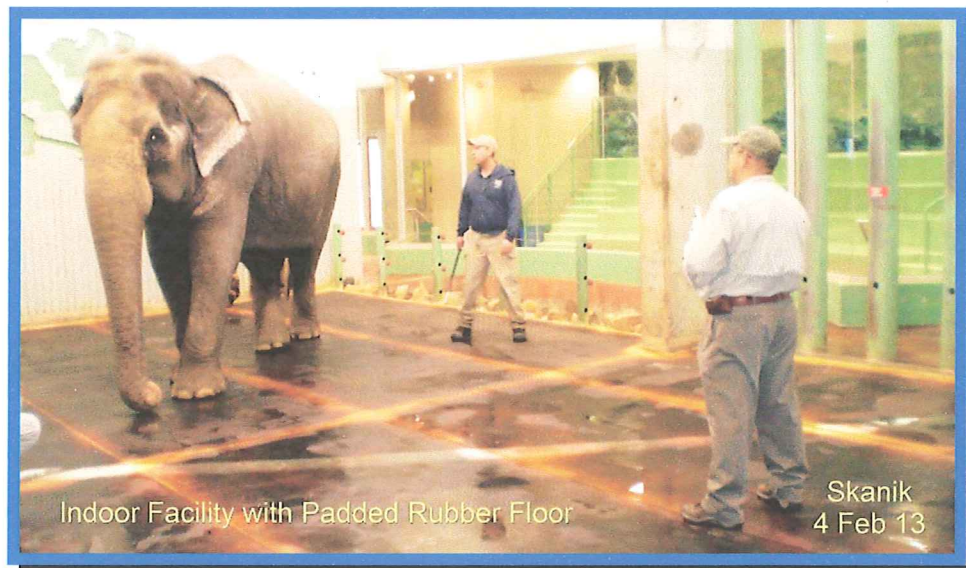
**Respiratory Difficulties While Walking and Lying Down**

**Facilities:**

As part of the Plan for Skanik 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 for last winter. It continues to function well and is a great addition to the overall husbandry care of Skanik. During the winter months, Skanik 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 exhibit yard with a dirt surface, pole structure, and shaded areas.



**The Heated Inside Exercise Facility**



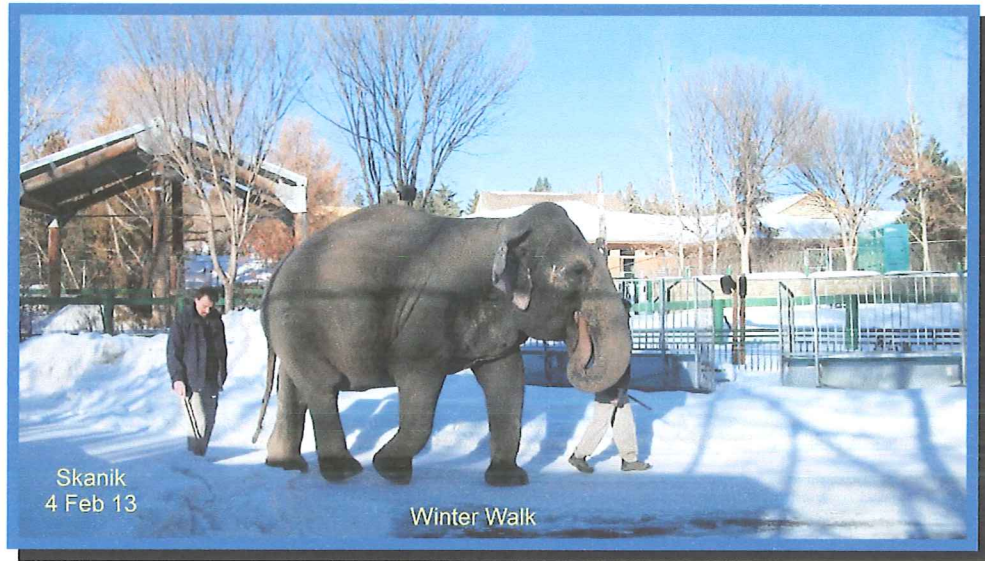
**Original Indoor Facility with Rubber Floor and Public Viewing**



**Treatments:**

Dr. Ness has had Skanik on several courses of oral antibiotics since 2009, which seems to have controlled the exudates seen on our previous exams. He 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.

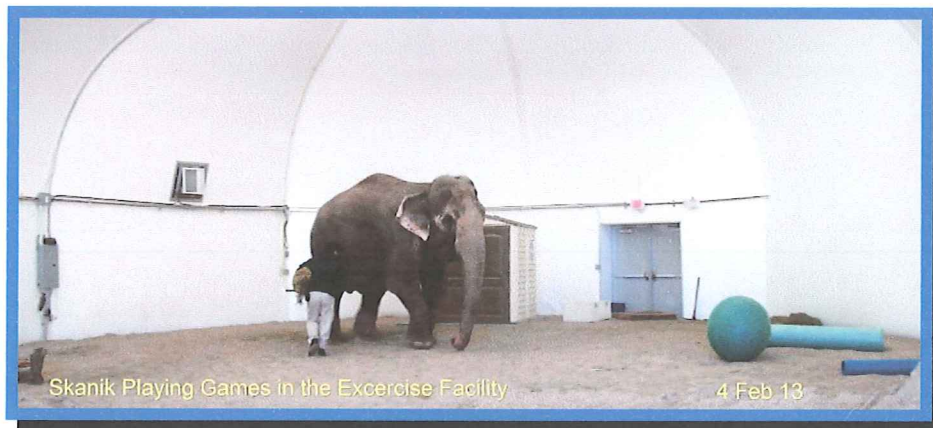
I administered no medications during my inspection.



**Daily Exercise Program**

**Enrichment:**

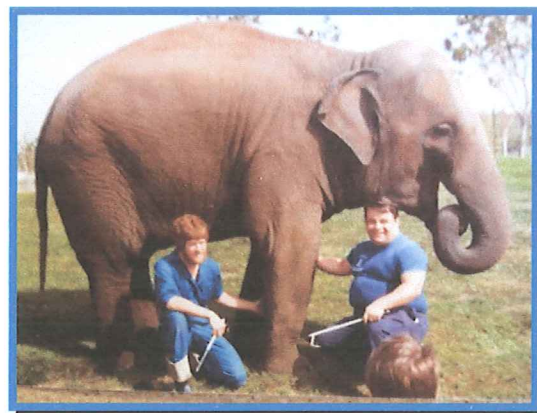
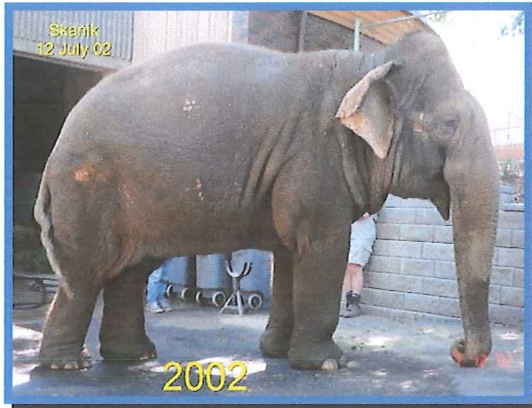
As a solitary animal, the Elephant Staff have developed a program of enrichment for Skanik in lieu of another animal for her company. This includes the Keepers acting as her “herd mates”, providing physical items, as well as mental stimulation.



**Enrichment Program**

**Weight Control:**

I am pleased to see that Skanik continues at a good weight, thanks to the diligence of the Elephant Care Staff. Her weight has been maintained at 3,800 kg (8,400 pounds). Her good weight and exercise program have helped her to tolerate her respiratory problem. Maintaining this 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 eleven years ago in July of 2002 during my first exam and how she has maintained her condition since 2012.

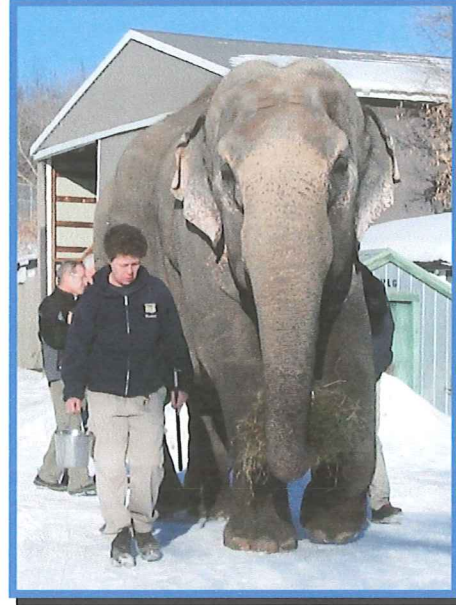
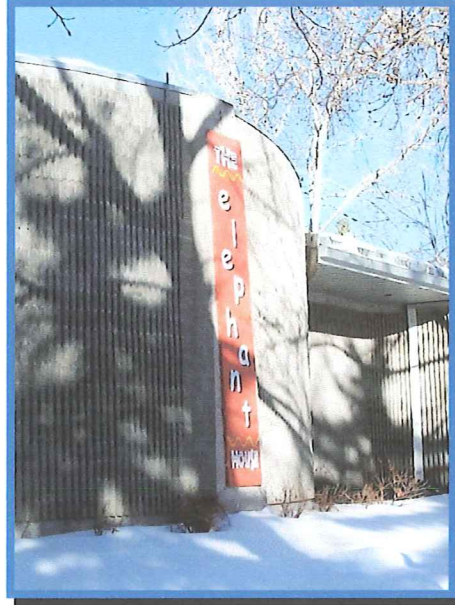


**Skanik: 2002 vs 2012/2013 and as a Juvenile**

**Staff Instructions:**

In my instructions to Staff, I reinforced the importance of movement, exercise and weight control in order for Skanik 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. 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 Upper molar to loosen and exfoliate.

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:**

- Skanik'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 Skanik's "herd" members, and I did not observe any abnormal behaviors or signs of being stressed. The only time that she seems a bit 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 exudates 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.
- Skanik is at a good body weight and the staff should be commended for maintaining this goal. She should weigh between 3,700 to 3,800 kg (~8,100 to 8,400 lbs)
- The keepers are taking good care of Skanik's feet with their current foot care program. Her current nail defects will probably continue to be problematic, as they are in many older Asian elephants, and quite probably will never completely disappear.
- Skanik's left upper molar may be starting to deform and therefore should be encouraged to be shed. There also appears to be an incoming molar behind it that will become deformed if the anterior molar is not shed.
- 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 impacted Left Upper molar.
- The 5,000 sq ft heated indoor exercise facility allows for maintaining Skanik's exercise program throughout the year.
- The padding over the concrete floor of the indoor facilities continues to greatly reduce the abnormal pressures on Skanik's feet in the winter months. The additional sand area has worked out well, also.
- Overall, Skanik appears to be calm and well-adjusted in her current situation and is in good general condition for a 40+ 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:**
  - Continue the current prescribed diet at a level that maintains her current weight—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 so she has to open mouth breathe.
- **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 Skanik’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 Skanik to open her mouth wider for better examination and photographs of her upper molars in order to monitor the progress of the left upper molar to be shed and the tooth coming in behind it. And to monitor and the incoming right upper molar and to increase the possibility of seeing the lower molars.
  - Continue to provide her with large branches to chew on to apply pressure to the left upper molar that is next in line to be shed before it deforms any more.

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**End of Report**



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