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22 February 11

**ELEPHANT CONSULTATION REPORT**

FOR

**VALLEY ZOO  
EDMONTON, ALBERTA**

FOR

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

ON

**31 JANUARY 11**

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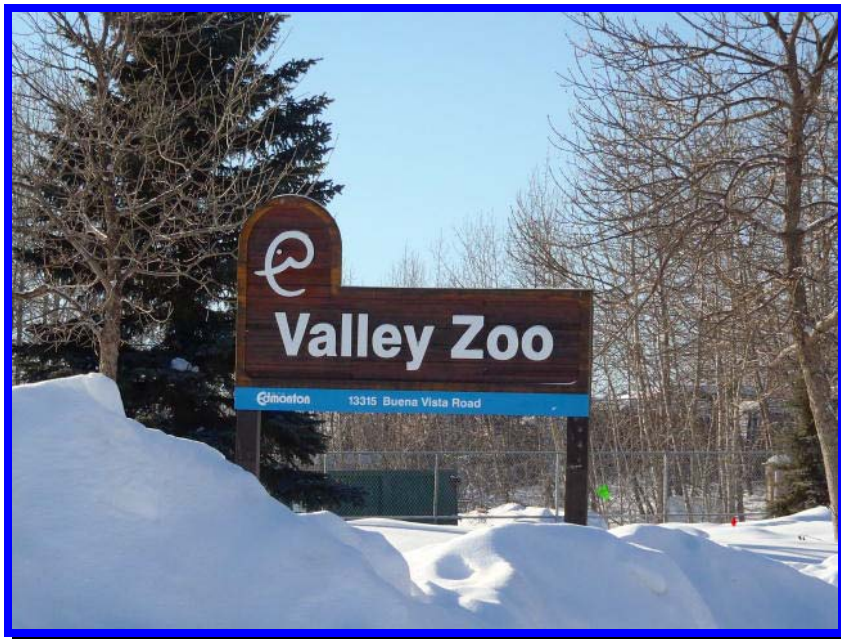
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**MEDICAL/HUSBANDRY RECORD OF INSPECTION**

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



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

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**Date of Inspection:** 31 January 11

**Species:** Asian Elephant

**Identification:** Female, “Skanik” aka “Lucy”, age 35 years

**Date of Report:** 22 February 11



## “Skanik”

### Introduction:

I examined the above elephant at the Valley Zoo in Edmonton, Alberta, Canada on 31 January 11. Present for the examination was: Dr. Milton Ness, Valley Zoo’s Veterinarian and the Elephant Care Staff along with Dr Jack Ingram, Equine Specialist from Edmonton. This was my third examination of Skanik, a 35 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 come up with an action plan for her.

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).

This report is my written evaluation of her current condition as found by my exam done on 31 January 11 and my recommendations for dealing with her problems.

### History:

Skanik has lived at the Valley Zoo in Edmonton, Alberta for 33 years. She came to the Zoo as a two year old orphan.

In 2002 when I 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. 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 passed a 3 meter endoscope up her trunk 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 exudates. The abnormal tooth had been shed by the time I arrived. 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 have continued this year, the Zoo requested that I come to Edmonton to examine Skanik and participate in another endoscopic evaluation of her nasal passages.

### 2011 Overall Findings:

Skanik, as in 2009, is still a calm, gentle elephant that is managed in a “free contact” system. Unfortunately, she still has a severe constriction of her nasal passages that affects her ability to breathe properly. The white exudates that were seen on my last visit have greatly diminished. As before, if she walks too fast during her daily exercise, she has to open mouth breathe to restore her oxygen deficit. She has a vertical crack in the #2 nail on her right front foot and a nail defect in the #4 nail on her left front foot—both are being managed by the keepers as part of their foot care program.

**General and Oral Examinations:**

On first impression, Skanik looks healthy—as she did on my last exam in 2009. She has relatively good movement while walking and is calm and gentle.

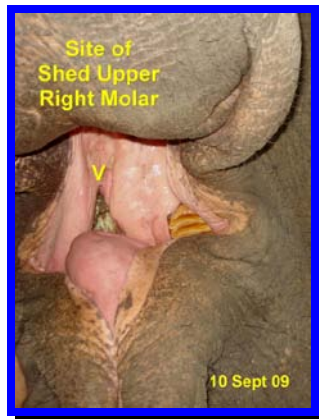
On closer inspection, however, it is noted again that when she walks too fast she has to periodically open mouth breathe in order to get enough air into her lungs. Elephants are obligatory nasal breathers, so to see an elephant breathe through her mouth is quite shocking. Simply walking her around in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



**Skanik Walking in Her Inside Enclosure**

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 has some stiffness in her left elbow. Her weight is now at 4,090 kg (9,000 lbs), which is down from my previous visit. A weight reduction program should continue, however.

The site where the deformed right upper molar was shed in 2009 was visualized and it appears that the next molar is coming in slowly. The left upper molar appears to be normal and has advanced several centimeters since my visit in 2009. It will be the next tooth to be shed. The lower molars could not be visualized.

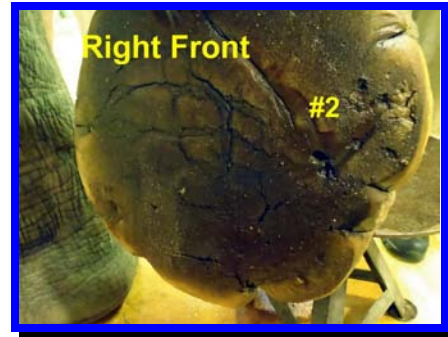


**Skanik's Deformed Upper Right Molar Site**

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.

**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 crack in the #2 nail on her Right Front foot with a corresponding minor defect at the pad/nail junction. This was noted in 2009 and the keepers have done an excellent job in dealing with and minimizing this problem.



**Skanik's Defect Involving Her Right Front #2 Nail**

The #4 nail on her left front foot has a minor defect, with a moderate pad/nail junction soft spot. This was a problem in 2009, but is nearly healed at this time, thanks to the keeper's diligence in their foot care program.

Her rear feet are in good shape, with no defects found.

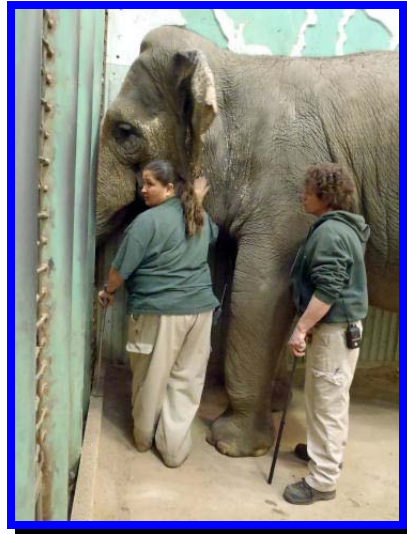


**Skanik's Defect Involving Her Left Front #4 Nail**



**Exam of Skanik's Nasal Passages:**

For the evaluation of Skanik's respiratory problem, Dr. Ness gave her a sedative that allowed for her to remain standing for examination, as we did in 2009. Dr. Jack Ingram, an Edmonton Equine Specialist, utilized a 3 meter (~10 foot) flexible endoscope to examine each nostril. Skanik was steadied by her handlers and her trunk was extended through the PC wall for the exam. She showed no signs of irritation when the scope was inserted into her trunk. Each nostril appeared the same, but this time the exudates that limited our exam in 2009 were gone.



**Dr. Ingram's Endoscopic Examination of Skanik's Nasal Passages**

This time, at the extent of the scope we were able to see what appeared to be a circumscribed swelling visible between two folds tissue (ethnoids?). The swelling was smooth and had a lighter color as compared to the surrounding mucosal membranes. The "mass" was between the nostrils and could be visualized from each nostril. Attempts to biopsy the swelling failed despite numerous attempts, because the biopsy forceps would glance off of the surface of the "mass". A "cytology brush" was utilized to see if we could scrape off some cells from the area in question. Also, cultures of the exudates found in the area were collected.

During the procedure, the relaxation from the sedative did not allow for Skanik to open-mouth breathe, so she forced her breaths through the constricted nostrils causing loud noises. When the sedative wore off, she returned to her normal breathing patterns, where sounds are heard at each inspiration and expiration.

**Facilities:**

The outside areas consist of two yards; a small one on the Service side of the barn and a large exhibit yard on the Viewing side of the barn. Both yards have a dirt surface, pole structures, and shade. During the winter months, Skanik is 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 public viewing, used to have concrete floors. Since my last visit, the floor of the larger of the two areas has been covered with a thick rubberized surface and the other with sand. The floor of the third inside area continues to be covered with sand and has a sand mound in it, also, where Skanik goes when she wants to lie down to sleep.



**Inside Facilities**

**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 exam..

I administered no medications during my inspection.

**Staff Instructions:**

I reinforced the importance of movement, exercise and weight reduction in order for Skanik to deal with her respiratory problem. Feeding the prescribed diet is imperative, i.e. no food items that aren't on the approved diet list. 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 continues to be the key to her ability to handle her respiratory condition.
- Her respiratory problem continues to be serious. The reduction of the exudates seen is encouraging. The suspect swelling/mass needs to be further evaluated. Unfortunately, the equipment utilized is for horses and the biopsy forceps is not robust enough to collect a piece of tissue from the suspect area.
- Due to her breathing problems, stress or excessive exercise needs to be minimized.
- Skanik is still overweight. The goal should be for her to lose 300 kg over the next 12 months.
- The keepers are taking good care of Skanik's feet with their current foot care program.
- The small size of the indoor facilities restricts the ability to maintain a good exercise program during the winter months.
- The addition of padding over the concrete floor of the indoor facilities greatly reduces the abnormal pressures on Skanik's feet in the winter months. The additional sand area is a benefit, also.
- The addition of additional foot care pedestals has helped to better care for Skanik's feet.

**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 in six months—or sooner if stronger biopsy instruments can be fabricated.
- **Weight Reduction:**
  - Continue the current plan for gradual weight reduction with a goal of getting her to loose 300 kg within the next twelve months.
  - 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.
  - Skanik and the keepers need to be trained to use the new foot care pedestals as designed, in order to facilitate proper trimming and the comfort of Skanik during her foot care sessions.
- **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.
- **Facilities Modifications:**
  - The indoor facilities need to be enlarged to facilitate exercise in the winter.
  - An alternative would be to install an elephant treadmill.
  - Develop a plan for modification or replacement of the indoor facilities to meet the industry standards.
- **Husbandry Modifications:**
  - Train Skanik to open her mouth wider for examination and photographs of her upper molars (the lowers are nearly impossible to see). Some folks use a leaf blower to get their elephants to open their mouths.

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**End of Report**

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