

Example (1). ORDERED: [payee's name, Social Security number (SSN), and address] is awarded \$ \_\_\_\_\_ from the [civilian or uniformed services] Thrift Savings Plan account of [participant's name, SSN, and address].

Example (2). ORDERED: [payee's name, SSN, and address] is awarded \_\_\_\_\_ % of the [civilian and/or uniformed services] Thrift Savings Plan account[s] of [participant's name, SSN, and address] as of [date].

Example (3). ORDERED: [payee's name, SSN, and address] is awarded [fraction] of the [civilian and/or uniformed services] Thrift Savings Plan account[s] of [participant's name, SSN, and address] as of [date].

Note: The following optional language can be used in conjunction with any of the above examples. FURTHER ORDERED: Earnings will be paid on the amount of the entitlement under this ORDER until payment is made.

\* \* \* \* \*  
[FR Doc. E6-12895 Filed 8-8-06; 8:45 am]  
BILLING CODE 6760-01-P

## DEPARTMENT OF AGRICULTURE

### Animal and Plant Health Inspection Service

#### 9 CFR Part 3

[Docket No. APHIS-2006-0044]

#### Animal Welfare; Elephants

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice of petition and request for comments.

**SUMMARY:** We are notifying the public that the Animal and Plant Health Inspection Service has received a petition requesting that we issue an interpretive rule or policy to clarify the space and living conditions required for captive elephants, and that we enforce the Animal Welfare Act and its implementing regulations by requiring that exhibitors fully comply with the regulations. We are soliciting comments from the public regarding the petition, and whether we should continue to regulate the handling, care, treatment, and transport of elephants covered by the Animal Welfare Act under the general standards in the regulations or promulgate specific standards for elephants. We are also requesting comments regarding what should be included in any such standards.

**DATES:** We will consider all comments that we receive on or before October 10, 2006.

**ADDRESSES:** You may submit comments by either of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and, in the lower "Search Regulations and Federal Actions" box, select "Animal and Plant Health Inspection Service" from the agency drop-down menu, then click on "Submit." In the Docket ID column, select APHIS-2006-0044 to submit or view public comments and to view supporting and related materials available electronically. Information on using Regulations.gov, including instructions for accessing documents, submitting comments, and viewing the docket after the close of the comment period, is available through the site's "User Tips" link.

- Postal Mail/Commercial Delivery: Please send four copies of your comment (an original and three copies) to Docket No. APHIS-2006-0044, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road Unit 118, Riverdale, MD 20737-1238. Please state that your comment refers to Docket No. APHIS-2006-0044.

**Reading Room:** You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690-2817 before coming.

**Other Information:** Additional information about APHIS and its programs is available on the Internet at <http://www.aphis.usda.gov>.

**FOR FURTHER INFORMATION CONTACT:** Dr. Barbara Kohn, Senior Staff Veterinarian, Animal Care, APHIS, 4700 River Road Unit 84, Riverdale, MD 20737-1234; (301) 734-7833.

#### SUPPLEMENTARY INFORMATION:

##### Background

The Animal Welfare Act (AWA) (7 U.S.C. 2131 *et seq.*) authorizes the Secretary of Agriculture to promulgate standards and other requirements governing the humane handling, care, treatment, and transportation of certain animals by dealers, research facilities, exhibitors, carriers, and other regulated entities. The Secretary of Agriculture has delegated the responsibility for enforcing the AWA to the Administrator of the Animal and Plant Health Inspection Service (APHIS). Regulations established under the AWA are contained in 9 CFR parts 1, 2, and 3.

Currently, part 3 consists of subparts A through E, which contain specific standards for dogs and cats, guinea pigs and hamsters, rabbits, nonhuman primates, and marine mammals, respectively, and subpart F, which sets forth the general standards for warmblooded animals not otherwise specified in that part, including elephants.

In a petition<sup>1</sup> dated February 2, 2006, In Defense of Animals (the petitioner) stated that exhibited elephants have chronic foot and joint problems due to inadequate space (indoor and outdoor enclosures) and inadequate living conditions (including amount of time confined, type of substrate, and cleanliness of floors). The petitioner requested that APHIS issue an interpretive rule or policy that clarifies the space and living conditions required for captive elephants, and that APHIS enforce the AWA and its implementing regulations by requiring that exhibitors fully comply with the regulations.

We are requesting comments from the public on the petition. We are also requesting comments on whether specific standards should be promulgated for elephants and what should be included in such standards. In particular, we invite responses to the following questions:

1. What are the causes of arthritis in elephants?
2. What, if any, foot care practices have been used on captive elephants to maintain healthy feet?
3. What substrates are best for captive elephants? Are there any substrate conditions that promote foot problems?
4. Do captive elephants require a certain amount of exercise (*i.e.*, walking) to maintain healthy feet?
5. What industry/professional standards are available for elephant care and husbandry?
6. Are there any other health or care issues related to elephants that should be specifically addressed in the AWA standards?

We welcome all comments on the issues outlined above and encourage the submission of scientific data, studies, or research to support your comments and position, including scientific data or

<sup>1</sup> The petition is available on the Regulations.gov Web site. Go to <http://www.regulations.gov>, and, in the lower "Search Regulations and Federal Actions" box, select "Animal and Plant Health Inspection Service" from the agency drop-down menu, then click on "Submit." In the Docket ID column, select APHIS-2006-0044. The petition will appear in the resulting list of documents. A copy of the petition may also be obtained from the person listed under FOR FURTHER INFORMATION CONTACT.

research that supports any industry or professional standards that pertain to elephant care. We also invite data on the costs and benefits associated with any recommendations. We will consider all comments and recommendations we receive.

**Authority:** 7 U.S.C. 2131–2159; 7 CFR 2.22, 2.80, and 371.7.

Done in Washington, DC, this 3rd day of August 2006.

**W. Ron DeHaven,**

*Administrator, Animal and Plant Health Inspection Service.*

[FR Doc. E6–12935 Filed 8–8–06; 8:45 am]

BILLING CODE 3410–34–P

## DEPARTMENT OF AGRICULTURE

### Animal and Plant Health Inspection Service

#### 9 CFR Parts 93, 94, and 95

[Docket No. APHIS–2006–0026]

#### **Bovine Spongiform Encephalopathy; Minimal-Risk Regions, Identification of Ruminants and Processing and Importation of Commodities**

**AGENCY:** Animal and Plant Health Inspection Service, USDA.

**ACTION:** Proposed rule.

**SUMMARY:** In a final rule published in the *Federal Register* on January 4, 2005, we amended the regulations regarding the importation of animals and animal products to establish a category of regions that present a minimal risk of introducing bovine spongiform encephalopathy (BSE) into the United States via live ruminants and ruminant products and byproducts, and we added Canada to this category. We also established conditions for the importation of certain live ruminants and ruminant products and byproducts from such regions. In this document, we are proposing to remove several restrictions regarding the identification of animals and the processing of ruminant materials from BSE minimal-risk regions, as well as BSE-based restrictions on gelatin derived from bovine hides. We do not believe these restrictions are necessary to prevent the introduction of BSE into the United States.

**DATES:** We will consider all comments that we receive on or before October 10, 2006.

**ADDRESSES:** You may submit comments by either of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov> and, in the lower “Search Regulations and Federal

Actions” box, select “Animal and Plant Health Inspection Service” from the agency drop-down menu, then click on “Submit.” In the Docket ID column, select APHIS–2006–0026 to submit or view public comments and to view supporting and related materials available electronically. Information on using *Regulations.gov*, including instructions for accessing documents, submitting comments, and viewing the docket after the close of the comment period, is available through the site’s “User Tips” link.

• *Postal Mail/Commercial Delivery:* Please send four copies of your comment (an original and three copies) to Docket No. APHIS–2006–0026, Regulatory Analysis and Development, PPD, APHIS, Station 3A–03.8, 4700 River Road Unit 118, Riverdale, MD 20737–1238. Please state that your comment refers to Docket No. APHIS–2006–0026.

*Reading Room:* You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1144 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690–2817 before coming.

*Other Information:* Additional information about APHIS and its programs is available on the Internet at <http://www.aphis.usda.gov>.

**FOR FURTHER INFORMATION CONTACT:** For information regarding ruminant products, contact Dr. Karen James Preston, Director, Technical Trade Services, Animal Products, National Center for Import and Export, VS, APHIS, 4700 River Road Unit 38, Riverdale, MD 20737–1237; (301) 734–4356.

For information concerning live ruminants, contact Lee Ann Thomas, Director, Technical Trade Services, Animals, Organisms and Vectors, and Select Agents, National Center for Import and Export, VS, APHIS, 4700 River Road Unit 38, Riverdale, MD 20737–1231; (301) 734–4356.

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

In a final rule published in the *Federal Register* on January 4, 2005 (70 FR 460–553, Docket No. 03–080–3), we amended the regulations regarding the importation of animals and animal products to establish a category of regions that present a minimal risk of introducing bovine spongiform

encephalopathy (BSE) into the United States via live ruminants and ruminant products and byproducts, and added Canada to this category. We also established conditions for the importation of certain live ruminants and ruminant products and byproducts from such regions. These regulations are in 9 CFR parts 93, 94, 95, and 96.

On November 28, 2005, we published in the *Federal Register* an interim rule (70 FR 71213–71218, Docket No. 03–080–8) that (1) broadened who is authorized to break the seals on a means of conveyance carrying certain ruminants from Canada and (2) amended the regulations regarding the transiting through the United States of certain ruminant products from Canada to allow for limited direct transloading of the products from one means of conveyance to another in the United States.

On March 14, 2006, we published in the *Federal Register* a technical amendment (71 FR 12994–12998, Docket No. 03–080–9) that clarified our intent with regard to certain provisions in the January 2005 final rule and corrected several inconsistencies within the rule.

In this proposed rule, we are proposing to further amend the BSE regulations to remove several restrictions related to the provisions of the January 2005 final rule that we believe are unnecessary to prevent the introduction of BSE from minimal-risk regions into the United States. We discuss those proposed changes below.

#### **Means of Identification of Bovines, Sheep, and Goats Imported From BSE Minimal-Risk Regions**

In our March 2006 technical amendment, we clarified that it was the intent of our January 2005 final rule that all live bovines, sheep, and goats imported from a BSE minimal-risk region be accompanied by a health certificate in accordance with § 93.405 and be individually identified in the region of export before being shipped to the United States. Because Canada was the only country categorized as a BSE minimal-risk region in our final rule, and because the standard means of individual livestock identification in Canada is an eartag, we specified in § 93.436 of the final rule that live bovines imported from a BSE minimal-risk region—in this case, Canada—must be individually identified by means of an official eartag of the country of origin. The eartag must be determined by the Administrator to meet standards equivalent to those for official eartags in the United States, as defined in 9 CFR part 71, and to be traceable to the

H. Murphy PPD

December 27, 2006

The Honorable Lloyd E. Levine  
Assemblymember  
California Legislature Assembly  
Suite 300  
Van Nuys State Building  
6150 Van Nuys Boulevard  
Van Nuys, California 91401

Dear Mr. Levine:

Thank you for your letter of December 8, 2006, to Secretary Johanns concerning the Department of Agriculture's (USDA) *Federal Register* notice (Docket No. APHIS-2006-0044) regarding the regulation of elephants under the Animal Welfare Act (AWA).

We recognize your interest in the welfare of captive elephants and appreciate the opportunity to respond. Since publishing the notice, we have received several requests to extend the comment period. After carefully considering these requests, we extended the comment period to a total of 120 days through two deadline extensions. As you indicate, the final deadline was December 11, 2006.

We understand that you would prefer an additional 30-day extension to the comment period, but we believe that the comment period has been more than sufficient for this notice, which was intended only to solicit comments on the concept of promulgating new rules. We are not making a specific proposal. Although the deadline has passed, your office is welcome to send additional information at any time to USDA officials for their review. In addition, should USDA pursue rulemaking on the matter, we would publish a notice of proposed rulemaking in the *Federal Register* and provide all stakeholders with the opportunity to comment before publishing a final rule.

We would like to note that USDA officials consider a variety of factors when they establish a comment period for a particular *Federal Register* notice. While the period should provide sufficient time for stakeholders to prepare and submit comments, it should also be balanced by the need to ensure adequate time for careful review of the comments. In addition, this balance should allow the policy evaluation process to move forward efficiently and expeditiously. We based our decisions to extend the comment period on these factors, and we believe that extending it further would hinder our ability to maintain a reasonable schedule for evaluating what, if any, elephant-related issues should be specifically addressed in the AWA standards.

DEC 29 2006

The Honorable Lloyd E. Levine  
Page 2

For your convenience, we have logged in your letter as a formal comment to the *Federal Register* notice. If you would like to send additional information to USDA officials regarding this issue, you may direct your correspondence to Dr. Barbara Kohn, a senior staff veterinarian with our Animal and Plant Health Inspection Service (APHIS). Her address is Animal Care, APHIS, USDA, Unit 84, 4700 River Road, Riverdale, Maryland 20737.

We welcome your input as we consider whether we should promulgate specific AWA standards for elephants. We hope this information is helpful.

Sincerely,

/s/

Bruce I. Knight  
Under Secretary  
Marketing and Regulatory Programs

cc: The Honorable Lloyd E. Levine  
Assemblymember  
California Legislature Assembly  
State Capitol  
Post Office Box 942849  
Sacramento, California 94249-0040

MRP, Wash., DC  
Dr. Chester A. Gipson, AC, Riverdale, MD  
Ms. Harriet Murphy, PPD, Riverdale, MD w/cy of inc.  
Ms. Felicia Stepney, LPA, Riverdale, MD w/cy of inc.

DRAFT:APHIS:LPA:GregRosenthal:td:cy:12/15/06:734-7776:24-5137749:CD9771  
FINAL:APHIS:LPA:GregRosenthal:td:12/26/06:734-7776:24-5137749:CD9771

Clearances:

EC \_\_\_\_\_  
LPA \_\_\_\_\_  
AC \_\_\_\_\_  
OA \_\_\_\_\_

SOURCE: BKohn, AC

State Capital  
P.O. Box 942849  
Sacramento, CA 94249-0049  
(916) 319-2040  
FAX (916) 319-2140

District Office  
6150 Van Nuys Blvd., #300  
Van Nuys, CA 91401  
(818) 904-3840  
Fax (818) 902-0764

e-mail: assemblymember.levine@assembly.ca.gov

## Assembly California Legislature



**Lloyd E. Levine**  
Assemblymember, 40th District

Chair  
Utilities and Commerce  
Committee Member  
Electoral, Redistricting and  
Constitutional Amendments  
Judiciary  
Governmental Organization

December 8, 2006

Secretary Mike Johanns  
U.S. Department of Agriculture  
1400 Independence Ave., S.W., Room 200A  
Whitten Building  
Washington, DC 20250  
Fax: 202-720-2166

Via Facsimile and U.S. Mail

Dear Secretary Johanns:

I am writing to request a 30-day extension in the comment deadline on USDA/APHIS Docket No. 2006-0044 (a notice of petition and request for comments concerning the handling, care, treatment, and transport of elephants covered by the Animal Welfare Act). This request, if granted, would extend the comment deadline on this notice until Wednesday, January 10, 2007.

Earlier this year I introduced legislation to promote the humane treatment of elephants in zoos and circuses (AB 3027). I will be reintroducing this bill in 2007. The need for better, more humane treatment of elephants was never more apparent following the untimely passing of Gita, a 48-year-old Asian elephant at the Los Angeles Zoo. That tragic occurrence left us all saddened and wondering if more could have been done to prolong her life. For years she had suffered through foot bone disease and arthritis while in the tight quarters of captivity. Her death should serve as a bellwether for all to focus attention on the issue of animal welfare.

Given the nature of this issue and the scope of the questions on which you are requesting comments, the comment deadline of December 11, 2006 is far too short. I am concerned that this is an insufficient amount of time for my office to prepare meaningful comments to be incorporated into the record.

Thank you for your consideration. Please let me know as soon as possible whether my request for an extension will be granted.

Sincerely,

Lloyd E. Levine  
Assemblymember, 40th District

cc: W. Ron DeHaven, Animal and Plant Health Inspection Service, U.S. Department of Agriculture

H. Murphy PPD  
2006-0044

October 12, 2006

The Honorable Christopher Shays  
U.S. House of Representatives  
1126 Longworth House Office Building  
Washington, D.C. 20515-0704

Dear Congressman Shays:

Thank you for your letter of August 1, 2006, to Secretary Johanns concerning the welfare of exhibited elephants.

We assure you that the Department of Agriculture (USDA) shares your interest in the care and treatment of these animals, and we appreciate the opportunity to respond to your concerns. Our Animal and Plant Health Inspection Service (APHIS) enforces the Animal Welfare Act (AWA), which requires people who exhibit elephants and other regulated animals to the public to be licensed with APHIS and meet its established minimum standards of animal care and treatment. Accordingly, these individuals must provide their animals with, among other things, a balanced diet, clean and structurally sound housing, protection from extremes of weather and temperature, and veterinary care. Although the AWA provides many important protections to exhibited animals, there are specific limitations to USDA's regulatory authority. Our authority to confiscate animals, for example, is limited to those situations in which an animal is suffering and action is not taken to alleviate the condition, or in which the environment directly causes an animal to be in imminent danger of suffering or death.

While the AWA does not specify surfaces or particular floor/ground coverings on which elephants may or may not be housed, if an elephant or other regulated animal demonstrates tangible and/or clinical signs of a medical condition, exhibitors are required to have their attending veterinarian evaluate and address the problem. In addition, APHIS officials enforce handling requirements designed to prevent the mistreatment of animals during training and performances. These standards prohibit the use of physical abuse to train or work animals and require exhibitors to handle animals in a manner that does not cause trauma, unnecessary discomfort, or behavioral stress.

APHIS officials actively work to ensure that licensed exhibitors maintain the AWA standards by performing randomly scheduled, unannounced compliance inspections of premises and animals covered under the law. During these inspections, our officials examine and document all areas of care and treatment covered by the AWA by observing all regulated animals, inspecting the facilities, and reviewing all appropriate records. If an inspection reveals noncompliance with

OCT 16 2006

The Honorable Christopher Shays

Page 2

AWA standards and regulations, they document the problems and take appropriate enforcement action. In cases of serious or repeat violations, they will seek to impose penalties such as fines, license suspensions, and license revocations. Additionally, our officials perform inspections in response to valid concerns and complaints received from the public, including reports of abuse and concerns regarding training or handling.

You may be encouraged to learn that, on August 9, 2006, APHIS published a *Federal Register* notice (Docket No. APHIS-2006-0044) regarding the regulation of elephants under the AWA. The notice, which APHIS published in response to a petition submitted by an animal welfare organization, solicits comments from the public on a variety of elephant welfare issues. In addition to addressing the issues of arthritis, foot care, and substrate conditions, the notice also requests comments concerning currently available industry and professional standards for elephant care and husbandry as well as any other health or care issues related to elephants that should be specifically addressed in the AWA standards. For your convenience, we have logged in your letter as a formal comment to the *Federal Register* notice.

Again, we share your interest for the welfare of exhibited elephants and hope this information assures you of our commitment to enforcing the AWA.

Sincerely,

/s/

Bruce I. Knight  
Under Secretary  
Marketing and Regulatory Programs

cc: MRP, Wash., DC  
Mr. Todd Ferrara, OCR, Wash., DC w/cy of inc.  
Dr. Chester A. Gipson, AC, Riverdale, MD  
Ms. Harriet Murphy, PPD, Riverdale, MD w/cy of inc.  
Ms. Felicia Stepney, LPA, Riverdale, MD w/cy of inc.

DRAFT:APHIS:LPA:GregRosenthal:td:9/28/06:734-7776:50-5132921:CD9491  
FINAL:APHIS:LPA:GregRosenthal:td:10/10/06:734-7776:50-5132921:CD9491

Clearances:

EC \_\_\_\_\_  
LPA \_\_\_\_\_  
AC \_\_\_\_\_  
OA \_\_\_\_\_

SOURCE: BKohn, AC

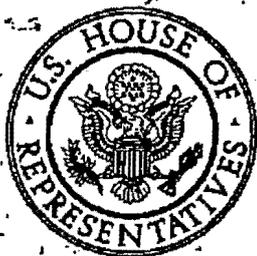
mail cc to:

Mr. Todd Ferrara

OCR

Room 213-A Whitten Bldg.

Wash., DC



# CONGRESS OF THE UNITED STATES

August 1, 2006

The Honorable Mike Johanns  
Secretary of Agriculture  
1400 Independence Avenue, SW  
Washington, DC 20250

Dear Mr. Secretary:

I am writing to express my support for the humane treatment of elephants in traveling shows and circuses.

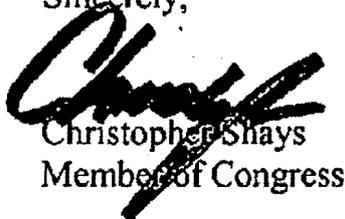
As you may know, there have been reports of mistreatment of elephants in zoos. Many elephants are placed in small enclosures that prevent adequate exercise and force elephants to stand on concrete and other unyielding surfaces for years on end. In other cases, elephants are forced to suffer from frequent abuse by their trainers.

The way a society treats its animals speaks to the core values and priorities of its citizens.

I respectfully request that the USDA uphold federal law by forcing zoos to vastly improve conditions for elephants or relocate them to a sanctuary with space and naturalistic condition conducive to elephant health.

I appreciate your time and attention to my request. If you have any questions, please feel free to contact me or Marissa Varnadore of my staff at 202/225-5541.

Sincerely,



Christopher Shays  
Member of Congress

CS:mv

Congressman  
Christopher Shays  
Fourth District Connecticut

Offices:

10 Middle Street, 11th Floor  
Bridgeport, CT 06604-4223

Government Center  
888 Washington Boulevard  
Stamford, CT 06901-2927

1126 Longworth Building  
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BRIDGEPORT: 579-5870

NORWALK: 866-6469

RIDGEFIELD: 438-5953

SHELTON: 402-0426

STAMFORD: 357-8277

WASHINGTON, DC: 202/225-5541

E-mail:

rep.shays@mail.house.gov

Internet:

www.house.gov/shays

Congress of the United States  
House of Representatives  
Washington, DC 20515-0704

OFFICIAL BUSINESS



OFFICE OF THE CLERK  
SECRETARIAT, USDA

7006 SEP 18 P 3:17



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*Christopher Shays*  
M.C.

Hon. Mike Johanns  
Secretary of Agriculture  
1400 Independence Avenue, SW  
Washington, DC 20250

H. Murphy, PRD  
2006-0044

October 10, 2006

Ms. Nicole G. Paquette, Esq.  
Director of Legal and Government Affairs/  
General Counsel  
Animal Protection Institute  
Post Office Box 22505  
Sacramento, California 95822

Dear Ms. Paquette:

Thank you for your letter of September 1, 2006, to Secretary Johanns and Dr. W. Ron DeHaven concerning the Department of Agriculture's (USDA) recent *Federal Register* notice (Docket No. APHIS-2006-0044) regarding the regulation of elephants under the Animal Welfare Act (AWA).

We recognize the Animal Protection Institute's (API) interest in the welfare of captive elephants and appreciate the opportunity to respond. Since publishing the notice, we have received several requests like yours to extend the comment period beyond the deadline of October 10, 2006. We gave these requests serious consideration, and, on September 15, 2006, published a followup *Federal Register* notice to announce an extension of the comment period to November 9, 2006.

We understand that API would prefer a 6-month extension to the comment period, and we would like to explain why we do not believe that an extension of that length is necessary. USDA's Animal and Plant Health Inspection Service (APHIS) welcomes information at any time that could aid its officials in their evaluation of regulatory options under the AWA. We encourage API and other stakeholders in this issue to collect and submit such information—including the captive elephant health report you mention in your letter—as it becomes available. In addition, should APHIS pursue rulemaking on the matter, it would publish a notice of proposed rulemaking and provide all stakeholders with the opportunity to comment before a final rule is published.

For your convenience, we have logged in your letter as a formal comment to the *Federal Register* notice. To submit additional comments, please follow the instructions contained in the notice. If you would like to send APHIS' Animal Care officials additional

Ms. Nicole G. Paquette, Esq.  
Page 2

information about this issue after the comment period has passed, you may direct your correspondence to Dr. Barbara Kohn, a senior staff veterinarian in Animal Care. Her address is Animal Care, APHIS, USDA, Unit 84, 4700 River Road, Riverdale, Maryland 20737.

We certainly value API's input as we consider whether we should promulgate specific AWA standards for elephants. We hope this information is helpful.

Sincerely,

/s/

Bruce I. Knight  
Under Secretary  
Marketing and Regulatory Programs

cc: MRP, Wash., DC  
Dr. Chester A. Gipson, AC, Riverdale, MD  
Mr. Michael C. Gregoire, PPD, Riverdale, MD w/cy of inc.  
Ms. Harriet Murphy, PPD, Riverdale, MD w/cy of inc.  
Ms. Felicia Stepney, LPA, Riverdale, MD w/cy of inc.

DRAFT:APHIS:LPA:GregRosenthal:td:cy:9/19/06:734-7776:27-5132048:CD9432  
FINAL:APHIS:LPA:GregRosenthal:td:10/3/06:734-7776:27-5132048:CD9432

Clearances:

EC \_\_\_\_\_

LPA \_\_\_\_\_

AC \_\_\_\_\_

PPD \_\_\_\_\_

OA \_\_\_\_\_

SOURCE: BKohn, AC; CHoward, PPD



**ANIMAL  
PROTECTION  
INSTITUTE**

API Headquarters  
Mailing Address:  
P.O. Box 22505  
Sacramento, CA  
95822

Street Address:  
1122 S Street  
Sacramento, CA  
95814

916.447.3085  
1.800.848.7387  
Fax 916.447.3070  
info@api4animals.org  
www.api4animals.org

September 1, 2006

Secretary Mike Johanns  
U.S. Department of Agriculture  
1400 Independence Ave., S.W., Room 200A  
Whitten Building  
Washington, DC 20250  
Fax: 202-720-2166

W. Ron DeHaven, Administrator  
Animal and Plant Health Inspection Service  
U.S. Department of Agriculture  
4700 River Rd, Unit 84  
Riverdale, MD 20737-1234  
Fax: 202-720-3054

Via Facsimile and U.S. Mail

Dear Secretary Johanns and Dr. DeHaven:

The Animal Protection Institute (API) would first like to thank you for publishing the Federal Register notice related to In Defense of Animals' (IDA) citizen petition regarding captive elephant welfare (Docket No. APHIS - 2006-0044).

Given the nature of this issue and the scope of the questions on which you are requesting comments, the comment deadline of October 10, 2006 is far too short. We are concerned that this is an insufficient amount of time to prepare meaningful comments to be incorporated into the record and will not incorporate yet to be released data. Accordingly, we request that you extend that deadline by at least six months to March 10, 2007. We further request that the extension be published in the Federal Register, so that the public will be aware of the new deadline for public comments.

We respectfully request this extension for the following reasons:

1. The USDA's request for public comments on elephant welfare is extremely broad, extending beyond the scope of IDA's petition, which focused on the causal relationship between lack of space and unnatural substrate and arthritis and foot disease. In particular, item number six in the Federal Register notice (Vol. 71, No. 153, Wed. August 9, 2006/Proposed Rules, 45438) states, "Are there any other health or care issues related to elephants that should be specifically addressed in the AWA standards?" There are many issues related to elephant welfare beyond the space and substrate issue. It will take much more time to collect and submit all the available scientific information and expert opinion related to these other issues.
2. It is my understanding that relevant data about the health conditions of captive elephants in the U.S. are currently being collected and analyzed by various entities. A full report on the prevalence of health problems in captive elephants and the relationship of these problems to captive conditions (based on data from 44 percent of American Zoo and Aquarium Association-accredited zoos with elephants) is expected to be available by March 10, 2007.

Given this information pertains to the elephants directly under the care of USDA-licensed exhibitors, we believe that it is essential to include this information in the public record for deliberations on this petition. To our knowledge, no other comprehensive assessment of foot disease and arthritis in captive elephants in the U.S. exists, and any USDA consideration of this issue would be incomplete without it.

We respectfully request an additional 6 months to prepare and submit comments. Accordingly, in the interest of thorough and complete deliberations on this issue of growing national concern, we urge you to grant this extension of the public comment period.

Thank you for your consideration and we are hopeful that you will grant the extension. Please let me know as soon as possible whether our request for an extension will be granted. I can be reached at (916) 447-3085, ext. 214 or [npaquette@api4animals.org](mailto:npaquette@api4animals.org).

Sincerely,



Nicole G. Paquette, Esq.  
Director of Legal and Government Affairs /  
General Counsel



IN DEFENSE OF ANIMALS

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1 June 2006

Dr. Chester Gipson  
Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
4700 River Rd, Unit 84  
Riverdale, MD 20737-1234

***RE: Clarification to Addendum to In Defense of Animals Citizen Petition (Feb. 2, 2006) Before the USDA Seeking An Interpretive Rule and Enforcement Under the Animal Welfare Act to Eliminate Violations of the Space and Conditions Regulations for Elephants at Zoos***

Dear Dr. Gipson:

Enclosed please find a copy of the complaint about conditions for elephants at the St. Louis Zoo, originally submitted by IDA on 14 March 2006 as an addendum to our Citizen Petition regarding violations of space and conditions regulations for elephants at zoos.

Upon review of the complaint, we have identified three areas that required clarification or correction. IDA is resubmitting the complaint, with the clarified sections indicated in bold face. In addition, we are including with this submission:

- Expanded excerpts from medical records at the St. Louis Zoo. (Actual records are posted at [http://www.helpelephants.com/st\\_louis\\_zoo.html](http://www.helpelephants.com/st_louis_zoo.html)).
- Photographs of elephants at the St. Louis Zoo.
- Videotape of elephants at the St. Louis Zoo
- CD containing revised complaint, medical records excerpts, photographs, and full text of medical records.

Thank you for your consideration.

b6





IN DEFENSE OF ANIMALS

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**ADDENDUM TO**

**FEB. 2, 2006 CITIZEN PETITION BEFORE THE UNITED STATES  
DEPARTMENT OF AGRICULTURE**

**SEEKING AN INTERPRETIVE RULE AND ENFORCEMENT UNDER  
THE ANIMAL WELFARE ACT TO ELIMINATE VIOLATIONS OF THE  
SPACE AND CONDITIONS REGULATIONS FOR ELEPHANTS AT ZOOS**

Submitted by:

**IN DEFENSE OF ANIMALS ("IDA")**

131 Camino Alto, Suite E,  
Mill Valley, California 94941

To:

**MIKE JOHANNNS**

Secretary of Agriculture  
U.S. Department of Agriculture  
Room 200A Whitten Building  
1400 Independence Ave., S.W.  
Washington, DC 20250

**DR. CHESTER GIPSON**

Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
4700 River Rd  
Unit 84  
Riverdale, MD 20737-1234

On

March 14, 2006

Revised

June 1, 2006

## **General Overview**

The St. Louis Zoo ("SLZ") houses **six female** Asian Elephants; Clara, Sri, Ellie, Rani, Donna, and Pearl, and one male Asian Elephant; Raja. In addition, a seventh female, Carolyn, died at the facility in April 2000. Foot and/or joint problems have been reported in the medical records for **6 of the 7** elephants. Joint and foot problems are also noted in the necropsy of the 8<sup>th</sup> elephant, Carolyn.

## **Exhibit and Holding Space-**

The zoo's Elephant Management Facility is a 13,000 square-foot holding area with 6,720 square feet of indoor space divided into 8 stalls and corridors for shifting. The barn is kept at 55-60 degrees Fahrenheit year round through gas circulating heat. All floors are concrete and unheated.

The zoo's outdoor exhibit area totals 53,860 square feet. One of the exhibits is smaller and is only used to house cows or calves and the other two are capable of housing bulls. The largest exhibit is just a .5 acre (23,250 square feet) yard.

## **Elephant Health Problems -**

All but one of the elephants currently alive at the St. Louis Zoo has experienced foot problems, lameness and/or joint disease. An eighth elephant who died at the zoo in 2000 also suffered from foot irregularities and arthritis.

The medical records demonstrate that SLZ personnel continue to treat the symptoms of

these problems by administration of antibiotics and painkillers, foot soaks and cutting necrotic (dead/rotting) tissue from the feet, without ever addressing the cause of the problem – the lack of space, exercise, confinement indoors during the winters and the concrete-floored barn.

Records indicate that SLZ personnel are aware that confinement indoors (where the floors are concrete) is the cause of some of these problems. For example, the “deeply worn” and sensitive nails of the young elephant Rani are attributed to “increased wear due to animals only recently being allowed out after being indoors all winter. (This animal is very active.)”

Skin problems on the feet of Pearl and Donna are thought to need no treatment because “animal is now spending more time outside, where the feet are dry and in more sunshine.”

Below is a brief summary of the health problems of elephants. More detailed excerpts from medical records are included in Appendix 1. Finally, copies of relevant pages from the medical records are attached as Appendices 2-9. Full copies of the medical records are included on the enclosed CD, along with an electronic version of this addendum and its appendices.

## **Details of Elephants and their Health Problems**

### **Carolyn**

Carolyn was found dead in her stall on April 11, 2000. She was 32-years-old. The necropsy found “severe polynephritis” and the cause of death was kidney failure. This condition was likely caused initially by a chronic urinary tract infection.

The necropsy identified cracks and defects on 3 of 4 of Carolyn’s feet and osteo-skeletal erosions on 3 of 4 limbs (arthritis). The left stifle (knee) showed severe DJD, erosion of half of the kneecap, femur and tibia. The left coxofemoral joint (hip) had severe Degenerative Joint Disease. The erosive lesions on the stifle and coxofemoral joint of the left rear leg are particularly disturbing, in that they indicate a chronic painful degenerative condition.

This elephant also suffered from uterine cysts and had tuberculosis bacterium present in a lymph node. She had been exposed to TB from an exhibit mate who died in 1979. Veterinarian performing necropsy believed that TB was “walled off” in granulomas and that Carolyn did not have “patent tuberculosis.”

### Clara

Clara, 52-years old, has experienced numerous foot and limb problems, including recurring abscesses of both back feet for at least five years (the records only begin in January 2000).

Clara’s left foot appears to have been abscessed for five years. Her right foot abscess appears to have lasted for three years, but then reoccurs a year later. Her left foot ends up with a serious defect – a 1.5 x 5 cm fissure near her middle toe.

Clara has also suffered from decubital sores (bedsores) on the left side of her face, her left elbow and left hip as a result of “prolonged recumbency” (laying down a lot) presumably due to foot pain.

Clara wears sandals on both back feet due to the chronic abscesses. Prior to the sandals, a boot was placed on Clara’s abscessed left foot. A note in the records from April 2000 indicates that when a boot was first placed on this foot, Clara removed it and “rubbed sole on chain until moderate hemorrhage.” Chaining of course would only worsen Clara’s problem and the fact that she rubbed her foot to the point of hemorrhage is an indication of the degree of discomfort she has experienced.

**Notes indicate that Clara has arthritis as well. Her left leg has had a problem with swelling. Signs that Clara is in pain include direct mention of pain in the medical records:**

**“arthritis pain” on 8/1/01, and “pain management” on 4/28/05. In addition, the records include entries noting “prolonged recumbancy” (lying down) leading to pressure sores, and prolonged use of non-steroidal anti-inflammatory drugs (NSAIDs).**

Clara’s foot infections are treated with antibiotics, foot soaks and trimming the necrotic tissue from her foot. Her foot pain and arthritis have been treated with banamine and phenylbutazone, two Non-steroidal Anti-inflammatory Drugs (NSAIDs).

### **Rani**

This elephant is just 9-years-old. She has been suffering from intermittent lameness in her hind legs since August 2001, shortly after her 5<sup>th</sup> birthday.

On July 4, 2004, her lameness was described in records: “She is very hesitant to bend at the knee and the left rear limb is worse than the right. She is still moving around the stall and eating well, but she shuffles along and even occasionally circumducts her rear limbs to not have to bend.” Her lameness is treated periodically with the NSAID phenylbutazone.

She has also suffered nail cracks and abnormal nail wear. Considered a “very active elephant,” this young animal has been locked indoors for the winter, a factor which the zoo acknowledged contributed to her nail problems.

Rani’s other problems include recurring belpharospasm (muscle contraction of her eyelids - indicative of eye pain and/or something lodged in the eye) of her right eye, which has forced her to hold her right eye closed; anemia; a bite wound on her tail; and tusk problems (missing right tusk, broken left tusk). In June 2005, a rectal ultrasound indicated that Rani was not pregnant, however news reports from November 2005 indicate that this young elephant is pregnant. (See Appendix 9) This is an early age for an Asian elephant pregnancy, as the average

age of first pregnancy in the wild is 13 years old.

### **Ellie**

Age 35, Ellie had a calf in approximately 1997. She is currently pregnant, after having been diagnosed in 2004 as a questionable breeder with a confirmed ovarian cyst.

Ellie has experienced foot problems. In 2002, three of four feet show superficial circular depressions or deficits. Her right front foot had a cracked nail with a deep separation from the nail bed. This was treated by cutting flesh away from margins of the separation. Her left foot had cracks in 2 nails.

News reports from November 2005 indicate that Ellie is pregnant. (See Appendix 9)

### **Donna**

This 34-year-old elephant has suffered from a sole abscess and cracked nail in her left foot. The records indicate that the sole abscess on her left foot lasted for at least a year (2001-2002). By February 2004, the abscess was back, with keepers reporting that the "site heals and then breaks open again." In 2005, the left foot was still infected and being treated with foot soaks and debriding (cutting away the dead tissue.)

Donna has also suffered from repeated nail cracks, with medical records noting in January 2005 that "This animal always had challenges with its nails."

The records indicate that the SLZ has an indication of the source of Donna's foot problems. In July 2000, veterinarians decided that no treatment was necessary for the dermatocytosis of Donna's front feet "as animal is now spending more time outside, where the feet are dry and in more sunshine."

In January 2002, Donna was diagnosed as overweight. Her other health problems include infertility and endometrial cysts, chronic problems with both tusks (cracks, breaks and infections) and **nuclear sclerosis in both eyes**.

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### **Pearl**

Pearl is a 35-year-old elephant who has suffered from foot problems for years. She has a prolapsed uterus, presumably stemming from the birth of Raji. The condition has caused urinary incontinence and her back feet have been affected from constantly standing in urine. Both back feet have soft soles and superficial ulcers. This condition is recorded consistently in the records since March 2001. The backs of her legs have had urine burns from this condition as well.

Pearl's front feet also have problems. There are nail cracks and superficial erosions over 60 percent of the surface of the soles, according to a 2002 note. A January 2003 entry notes a "cuticle abscess that erupted this month."

Pearl was given phenylbutazone for front left quarter lameness in August – September 2002. This lameness recurs, according to the records, in January 2004.

Pearl's other health problems include repeated urinary tract infections, a perineal hernia, endometrial cysts, tusk and tooth fracture and infection.

### **Raja**

This 13-year-old son of Pearl is suffering from the beginning stages of foot disease. Between 2001 and 2005, medical records note nail cracks on 3 of 4 feet. He has also been noted to have pitted soles in front feet and dry, cracked heels in rear feet. Raja also has had chronic fractured tusks with infected pulp cavity on one occasion.

## Sri

Sri, 26, is the only elephant at the SLZ who has not experienced foot or joint problems. In November 2005, a pregnant Sri lost her baby during labor. To date, she still carries the dead fetus in her body. Failed pregnancies are another captivity-related problem, with **11 elephant pregnancies** since 2001 ending in stillbirth, death of fetus in utero, or death of baby within 1 day of birth.

## **Conclusion**

Elephants at the St. Louis Zoo are being held in inadequate conditions that are not consistent with their health and well-being. In addition to the foot and joint disease discussed in detail above and in the attached excerpts, the elephants suffer from other common “zoo-genic” conditions such as reproductive abnormalities and tusk injuries.

The St. Louis Zoo is aware at minimum that prolonged confinement of elephants during winter months causes problems with elephants’ feet, yet it has done nothing to address the cause of the elephants’ foot and joint problems: inadequate space and substrates.

Given this information, USDA should inspect the St, Louis Zoo elephants’ feet, medical records, and living conditions and require this zoo to either significantly improve the conditions under which it confines elephants, or relocate the elephants to a sanctuary where their needs can be met.

## SRI BEFORE PREGNANCY



Photo source: St. Louis Zoo Website

## SRI'S CELL WHERE SHE WAS REPORTEDLY CONFINED BEFORE AND AFTER HER BABY DIED IN UTERO

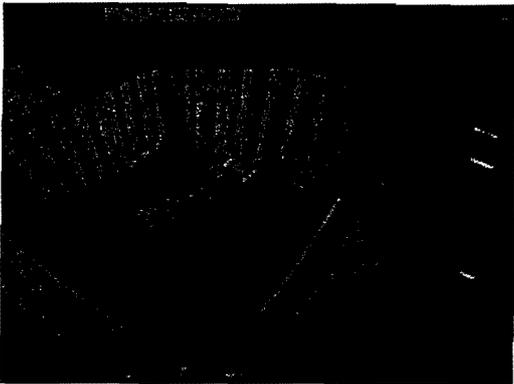
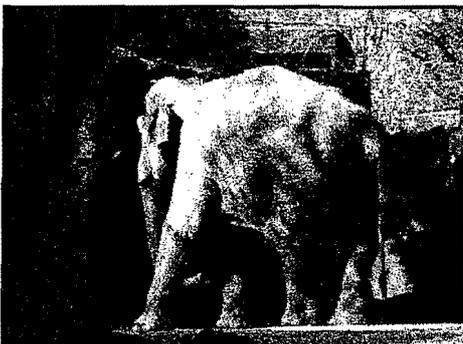


Photo taken of Sri from St. Louis Zoo Closed-circuit television, November 2005, a week after she lost her calf in utero.

## SRI AFTER CARRYING DEAD FETUS FOR 4 MONTHS



Photos taken March 16, 2006

*Sri appears to be losing weight. Skull and backbone are prominent.*

## FEET OF CLARA AT ST. LOUIS ZOO:



Photos taken November 2005.

From video documentation, it appears that Clara cannot bear weight on either foot for more than a few minutes. She is observed to constantly shift weight back and forth from one foot to another.

## NORMAL ELEPHANT FOOT



Excerpts Regarding Foot Problems and Lameness from Medical Records

**Carolyn**

**Accession number 0680664**

Est. DOB Feb. 11 1968 / Death April 11, 2000 32Y, 2M at death

Dam/Sire unknown/wild

"28 February 00 "Marked" lameness noted on right rear limb  
Reluctant to move knee

11 April 2000 found dead in stall. Necropsy revealed "severe polynephritis" likely caused by chronic urinary tract infection. Cause of death was kidney failure.

**Necropsy:**

Right forefoot: Two defects/cracks at lateral toe.

Bilateral rear: Left [foot] has large defect parallel to surface at medial toe and a lesser crack in digit 3, Right foot has cracks cranially at digit 3 and laterally at digit 4.

Skeletal system: Left fore: Scapulohumeral joint: Mild cartilage erosion noted at the articular surfaces. Moderate articular erosion present at the medial and lateral portions of the elbow. Right forelimb joints appear within normal limits. Left coxofemoral joint: the femoral head has multiple irregular erosive to pitted lesions of the cartilage with osteophyte formation at the acetabulum. Left stifle: the lateral femoral condyle is approximately half the size of the right . . . the cartilage is irregularly eroded at the patellar groove. Cartilage has been lost from the distal half of the articular surface of the patella. The articular surface at the proximal tibia is eroded and pitted with osteophyte deposition. Right coxo-femoral joint changes are milder with respect to erosions and osteophyte formation, and the stifle has no erosions.

**Clara**

**Accession Number 055667**

**Regional Studbook #235**

Wild caught 1953 est date of birth 1953

Dam and Sire unknown/wild

purchased 1955 from Goebel L

18 February 2000 "sole abscess seems to have ruptured. Examination of sole reveals a soft tender spot approx 8 cm medial to lesion between toes. Also an open tract is present from this spot to lateral foot wall.

20 March 2000 "no change in lameness. Occasionally seen to lie down during the day (not usually done) . . . duration and progression of lesion raises concerns about potential osteomyelitis. Keepers inquired about possible analgesics.

23 March 2000 "specimen reluctant to lift left foot."

19 April 2000 Clara is immobilized in elephant chute and sedated. Veterinarians note "marked undermining of sole", cut away necrotic tissue. Appears that boot is placed on Clara at this time.

20 April 2000 note indicates that Clara removed the boot and "rubbed sole on chain until moderate hemorrhage"

2 May 2000 Clara is sedated to examine large swelling on left hip. Records note decubital sores on left side of face, left elbow and left hip "due to prolonged recumbency." Entry also states "lance abscess."

3 May 2000 Clara placed on banamine for 3 days.

July 20 notes that abscess is getting smaller and continue debriding. But new abscess found on right foot.

16 March 2001 notes a left rear – solar abscess. Wearing sandal daily.

18 June 2001 again notes left rear lesion.

1 Aug 2001 keepers report arthritis pain seems to be more prominent and consistent

16 Dec. 2001 note right rear limb crack. "sole of right hind foot is soft and can be undermined where lateral nail crack starts"

8 Jan 02

4 February 2002 "Left rear foot has deteriorated. Sole between the previous defect is undermined all the way to the third nail and keepers report tract to the cuticle of this nail as well. Recommend removing entire undermined sole and advised that nail may slough." Right foot reported as improved but still debriding and wearing sandals on both feet.

28 November 2003 Right rear foot pad "completely healed" but left foot has "significant deficit" and "fluid pocket".

18 March 2004 Right foot shows evidence of abscessation. Foot defect subsequently noted.

2 April 2004 Left rear foot continues to have subsolar abscess.

10 July 2004 ultrasound exam shows "small amount of fluid appreciated under damaged surface of both feet. Right foot has 3 X 3 cm soft area near center of the foot. Left foot 1.5 X 5 cm fissure near middle toe. Keepers continue to trim feet, flush and soak. Animal is wearing sandals on both rear feet."

April 28, 2005 Placed on phenylbutazone (an NSAID) for "pain management" "until further notice."

**Rani**

**Accession Number 101145**

Captive born, July 5<sup>th</sup>, 1996

Dam 876015 at Jacksonville Zoo and Gardens

Sire M85030 at Rosamund Gifford Zoo at Barnet

Loan from Jacksonville (896059)

27 August 2001 Intermittent lameness on left hind leg noted

6 September 2001 Crack in nail 6 cm on cranial aspect of mid nail of left hind foot

16 January 2002 Right rear leg nail crack extending to ¾ of nail on digit 5. "recommend paring to prevent further spreading. All feet show superficial circular defects, soft pads."

13 Feb. 2002 Lameness in rear limbs. Put on phenylbutazone for 3 days.

Aug 2001- Feb 2002 – There are 26 entries which state "Problem: Lameness LEG (left hind) (suspected)"

8 January 2003 "keepers report intermittent chronic left rear leg lameness" noted.

26 March 2004 – Lameness not noted but "ventral aspect of medial nails on hind feet is deeply worn, somewhat sensitive. Discussed with ZM possibility of abnormal conformation, increased wear due to animals only recently being allowed out after being indoors all winter. (This animal is very active.), trauma on some object in exhibit or holding."

4 July 2004 Stiff gait to rear limbs for last 48 hours. She is very hesitant to bend at the knee and the left rear limb is worse than the right. She is still moving around the stall and eating well, but she shuffles along and even occasionally circumducts her rear limbs to not have to bend. 3 days of phenylbutazone.

22 August 2004 Moving slowly. "stiff rear limbs" 3 more days of phenylbutazone.

**Ellie**

**Accession Number 101144**

**Regional Studbook # 362?**

Wild Born, Est. DOB 1971

Est. Age 34 Y, 5M, 17D, +/- 29 Years

Dam/Sire unknown/wild

On loan from Jacksonville Zoo (876515)

December 2001 Hemorrhoids noted.

16 January 2002 Annual exam: Animal ambulates with "stiff" front Right limb which the staff "considers normal" for this animal. Three of four feet show superficial circular depressions or deficits. Right front limb has lateral long crack in digit #1 with a moderate separation of nail bed on this leg. This separation is deep and material embedded within the .5 cm deficit. Recommend paring (trimming) margins of this deficit.

Right ear tear, lesion also noted. Hemorrhoids reduced in size. Healing ulcerated tissue near tail noted.

12 April 2002 Rectal Ultrasonography by Dr. Dennis Schmitt. Found to have healthy uterus but a cyst on one ovary.

Oct. 2002 Restrained for reproductive exam. Left ovary deemed normal, right ovary not examined. (fluid filled loop of intestine blocking view).

8 Jan 2003 Annual Exam. Dry cuticles, area over medial left rear hoof wall to be explored and small area on left elbow draining some purulent materials.

11 Feb. 2004 Annual Exam: Left foot also has cracks in nails 3 and 5 with some extensions into the cuticle noted. Suggest if crack grows out a bit that keepers try to incise horizontal line across the top to try to keep it from extending back to the cuticle. Other three feet look normal.

13 May 2004 Reproductive exam. "Dr. Dennis Schmitt feels Ellie may have a cyst on her left ovary which may be contributing to her abnormal endocrine profile." Give GnRH Im for 3 weeks and monitor progesterone.

27 July 2004 Another reproductive exam. Again left ovarian cyst suspected. GnRH given to stimulate a normal cycle of breeding if it is not an ovarian cyst and if it is should cause luteinization of the cyst.

9 -11 Sept 2004 Ellie put with Raja and bred.

28 December 2004 Diagnosis of pregnancy supported by ultrasound and elevated progesterone level.

January 2005 Annual Exam. Feet deemed healthy

2 Feb. 2005 "Tail wound from bite."

**Donna**

**Accession Number 071665**

Regional Studbook # 235

Estimated birth date May '71, Est. Age 34 Y, 2 M

Sire and Dam unknown/wild  
Purchased from Goebel L

Dermocytosis of front feet noted July '00. "No treatment at this time as animal is now spending more time outside, where the feet are dry and in more sunshine."

2 March 01 Right tusk broke off 1 inch below gumline. Purulent discharge present. "Sole abscess" plus crack that has been "managed for several months" in nail 3 of left front.

16 March 01 Annual exam. Left tusk crack. Right tusk broken below gingival surface, mild superficial infection present, being managed appropriately with flushing. Feet – Right Front: thickened cuticles extending to sole. Left front: cuticles overgrown, sole smooth but has soft spot adjacent to third nail, third nail split distally. Right and Left rear: Pad healthy, cuticles overgrown, some superficial cracks in pad.

4 April 01 Soft spot/lesion (previously referred to as abscess) continues on left front foot adjacent to nail 3. Note indicates keeper trimming overlying horn.

6 April 01 Ultrasound of "solar abscess" on left front foot done. "Keepers to continue debriding this area."

9 January 02 Animal is diagnosed as overweight. Left front foot abscess still present. All four feet show circular erosions. Feet of right and left forelimbs have significant cracks in nails. Subsequent entries do not mention abscess.

12 April 2002 Reproductive exam. "Rectal ultrasonography by Dr. Dennis Schmitt revealed multiple endometrial cysts, rendering this cow non-reproductive."

7 January 2003 physical exam reveals superficial erosions on all feet, but feet deemed "healthy." Left front foot has crack that keepers continue to trim. Both tusks have been broken but have now grown beyond the gingival rim. Distal tail missing (chronic injury).

10 February 04 Deep soft spot on left front foot. "Keeper reports that site heals and then breaks open again."

27 January 2005 Left front foot soaked regularly due to soft spot on sole below 3<sup>rd</sup> nail. 3<sup>rd</sup> nail also has crack. RF has cracks on nails 3 and 4. Foot is soaked twice weekly. Left rear has cracks on nails 2, 3, 4 but "all are in good condition." "This animal always had challenges with its nails," but notes nails look healthy and elephant team is doing well in managing the cracks in the nails.

**Pearl**

**Accession Number 073666**

Regional Studbook # 234

Est. DOB 1971

Dam and Sire unknown/wild

Acquired from Southwick Nov '73  
Loaned to Dickerson Mar '90  
Returned to St Louis Sept '91

1 December 2000 Nail crack in 3<sup>rd</sup> toe of left front

7 March 2001 Front left foot, Rear feet have soft pads due to chronic wetness from urinary incontinence (result of prolapsed uterus). This also causes burning of skin on back of legs.

10 January 2002 physical exam. Nails ok on right front foot but sole has multiple superficial erosions covering 60 percent of surface. Left front foot Toe 5 "full thickness top to bottom crack that has been present for approx 1 year. Keepers continue corrective trimming. Sole also has multiple superficial erosions. Rear feet: nails soft (suspect from urine wetting), soles have superficial ulcers covering approximately 40 percent of sole. Skin and margins of soles erythematous and soft with some superficial sloughing due to urine scald.

8 August 2002 – 5 September 2002 Front left quarter lameness recorded. Elephant put on phenylbutazone.

26 Sept. 2002 – Transrectal and transdermal ultrasonic evaluation of perineal hernia confirms herniated uterine horn ventral to tail and pooling urine ventrally. Pooled fluid (urine) has flocculent appearance. Several endometrial cysts are present throughout uterine mucosa, several uterine masses are present (polyp or neoplasms.)

10 January 2003 Physical exam notes hoof crack on lateral digit of left front foot and also a cuticle abscess that erupted "earlier this week" but is "quiescent now". Both rear feet have soft soles and hooves due to chronic urine dribbling from incontinence– soft almost gelatinous tissue noted in interdigital space, does not go deeply when trimmed with a hoof knife.

30 December 2003 "This elephant has been subjected to some aggression from the male, so elevation [of white blood cell count] may be stress-related."

12 Feb. 2004 Routine Physical. All feet look okay, only minor cracks in toes, no splits in soles.

26 Jan 2005 Uterine prolapse still present, not thought to "compromise her healthy (sic)." No evidence of urine scald on this exam. Foot exam – both front feet have small (1-2 cm), superficial (5 mm deep) irregularities on the sole surface, however these are shallow and insignificant. Both back feet are in excellent condition.

11 Feb. 2005 "Left foot – a 2-5 cm fluid pocket is present 3 cm deep from the pad under the area of a superficial sole deficit. The elephant is not lame on this leg and it is suspected that the pocket is a seroma. No underlying lesions noted on right foot.

*Note:* A seroma, is an accumulation of serum that has accumulated in a dead space in the tissue. It is the result of tissue insult and the product of tissue inflammation and the body's defense mechanisms.

**Raja**

**Accession number 921222**

Regional Studbook # 339

Captive born at St Louis Zoo

DOB Dec. 27, 1992, Age 12Y, 7M

Dam 073666 Pearl

Sire 815 at Dickerson Park Zoo

11 Jan 2000 "Left tusk canal remains open [3 inches]." Keepers flushing daily, cleaning with cotton swab. Canal believed to be closed and no infection present.

14 March 2001 Annual Exam. Nail cracks noted on 3 of 4 feet. Tail tip is roughened (had been bitten as calf), right tusk has fractured end, left tusk has exposed pulp canal.

18 June 2001 Skin loss on trunk. Trauma is suspected cause.

15 January 2002 Annual Exam: Nail cracks in 3 of 4 feet. Pitted soles in front feet. Dry cracked heels in rear feet. Right tusk fractured at end, left tusk pulp canal exposure continues.

15 January 2003 Annual Exam: Superficial nail cracks noted on front feet. Feet described as healthy. Right tusk is shorter and cracked.

14 February 2004. Annual Exam: Superficial nail cracks on front feet "being monitored/stopped by keepers." Left tusk has 4 inch longitudinal crack

29 January 2005 Minor cracks on front feet again noted.

**Sri**

**Accession Number 101833**

**Regional Studbook # 247**

Captive Born? Est DOB Jan. 1980

Est. Age 26

Dam/Sire unknown/wild

On loan from Seattle (21262)

No problems with feet noted here.

Wound on end of tail due to bite by male Feb. '04

Lesion on roof of mouth possible trauma Jan '04

Suspect Monocytosis and Iron Transport Disease or liver problems but not confirmed.

Annual Exam January 05 no abnormal findings, "all feet in excellent condition"

Suspected pregnancy Jan. '05 , later confirmed

Baby died in utero November 2005. As of Jan 2006, fetus has not been expelled.

7/20/06 Revised press  
release to reflect  
OGC changes

Darby Holladay (301) 734-3265  
Jerry Redding (202) 720-4623

## USDA SEEKS COMMENTS ON CAPTIVE ELEPHANTS' SPACE AND LIVING CONDITIONS

WASHINGTON, April XX, 2006--The U.S. Department of Agriculture's Animal and Plant Health Inspection Service today seeks public comment on the space and living conditions for captive elephants. All elephants held by circuses, exhibitors or zoos are regulated under the Animal Welfare Act (AWA) and must have a USDA exhibitor's license.

The comments will assist APHIS in determining whether specific standards are needed in the AWA for captive elephants' space and living conditions and what those standards should be.

Specifically, APHIS invites responses to the following questions:

- ~~Are there any published scientific studies on the causes of arthritis in elephants?~~ <sup>What are the causes of arthritis in elephants?</sup>
- What, if any, foot care practices have been used on captive elephants to maintain healthy feet?
- What floors are best for captive elephants? Are there any flooring conditions that promote foot problems? ~~Please provide scientific data to support your answers.~~
- ~~Are there any scientific studies that indicate that~~ <sup>Do</sup> captive elephants require a certain amount of exercise (i.e., walking) to maintain healthy feet?
- What industry/professional standards are available for elephant care and husbandry?
- Are there any other health or care issues related to elephants that should be specifically addressed in the AWA standards?

The AWA authorizes the Secretary of Agriculture to set standards and regulations governing the humane handling, care, treatment and transportation of certain animals by dealers, research facilities, exhibitors, carriers and intermediate handlers.

Notice of this action is scheduled for publication in the \_\_\_\_\_ *Federal Register*.

Consideration will be given to comments received on or before \_\_\_\_\_. Send an original and three copies of postal mail or commercial delivery comments to Docket No. APHIS-2006-0044, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road, Unit 118, Riverdale, MD 20737-1238. If you wish to submit a comment using the Internet, go to the Federal eRulemaking portal at <http://www.regulations.gov> and, in the "Search for Open Regulation" box, select "Animal and Plant Health Inspection Service" from the agency drop-down menu, then click on "Submit." In the Docket ID column, select APHIS-2006-0044 to submit or view public comments and to view supporting and related materials available electronically.

Comments are posted on the Regulations.gov Web site and may also be viewed at USDA, Room 1141, South Building, 14th St. and Independence Ave., SW, Washington, D.C., between 8 a.m. and 4:40 p.m., Monday through Friday, excluding holidays. To facilitate entry into the comment reading room, please call (202) 690-2817.

#

Note to Reporters: USDA news releases, program announcements and media advisories are available on the Internet. Go to the APHIS news release page at <http://www.aphis.usda.gov/newsroom>. Also, anyone with an e-mail address can sign up to receive APHIS press releases automatically. Send an e-mail message to [lyris@mdrdlyriss10.aphis.usda.gov](mailto:lyris@mdrdlyriss10.aphis.usda.gov) and leave the subject blank. In the message, type subscribe press\_releases.

(Revised April 2004)

APHIS REGULATORY WORKPLAN

Short title for this action: Request for comments on IDA petition on elephants

Please sign and date. Then send to the next office.

1. Originating Office: Dr. Barb Kohn

2. Regulatory Liaison for Program: \_\_\_\_\_

Is this action related to the functions transferred from APHIS to the DHS? \_\_\_ yes X no

3. Deputy Administrator: [Signature]

Deputy Administrator's Recommended Designation of Significance:

- NOT SIGNIFICANT  
 SIGNIFICANT  
 ECONOMICALLY SIGNIFICANT

4. Regulatory Analysis and Development Cal 3-15-06  
APHIS Docket Number: APHIS-2006-0044

5. Assistant Commissioner, Office of Field Operations, Bureau of  
Customs and Border Protection, DHS: \_\_\_\_\_

Does the Assistant Commissioner wish to review a copy of the draft regulation? \_\_\_ yes \_\_\_ no

6. Administrator: Kevin Shea 3/16/06  
(Please hold for Judy Lee, Regulatory Analysis and Development Staff)

7. OBPA: Mark S. [Signature] 5/17/06

OBPA's Recommended Designation of Significance:

- NOT SIGNIFICANT  
 SIGNIFICANT  
 ECONOMICALLY SIGNIFICANT

8. Under Secretary (signs inside)

9. Julie Hetrick, OBPA  
Room 118-E, Whitten Building  
Call 720-1272 for pickup

10. Susan Gallagher, PPD-RAD  
4700 River Road Unit 118  
Riverdale, MD 20737  
734-7187

3-15-06  
RAD

U.S. Department of Agriculture  
Animal and Plant Health Inspection Service  
REGULATORY WORKPLAN

APHIS Docket No. 2006-0044

Workplan requires OMB review: Yes

<p>1. Under Secretary's Recommended Designation of Significance:</p> <p><input checked="" type="checkbox"/> NOT SIGNIFICANT  <input type="checkbox"/> SIGNIFICANT  <input type="checkbox"/> ECONOMICALLY SIGNIFICANT</p>	<p><u>Additional Instructions from Under Secretary (optional):</u></p>
<p><u>Signature:</u> (Under Secy.)    <u>Date:</u> 5-19-06</p> <p style="text-align: center;"><i>Jeremy Strong / for</i></p>	<p>OBPA WORKPLAN # - 06-008  Date: 3/20/06</p>
<p><input type="checkbox"/> Major under Public Law 103-354 (ORACBA)</p>	<p>OMB's Designation: <u>Not Significant</u>  Date: 7/7/06  RIN: _____</p>

2. Descriptive Title:

Notice of receipt of In Defense of Animals petition on elephants and request for comments.

3. Type of Action:

Notice: X      Proposal: \_\_\_\_\_      Advance Notice of Proposed Rulemaking: \_\_\_\_\_

Interim: \_\_\_\_\_      Final: \_\_\_\_\_      Direct Final: \_\_\_\_\_      Other: \_\_\_\_\_

4. Description of Action and Agency Contact:

a. Briefly describe what the current regulations require or allow, how you wish to change them, what triggered the need for this change, and the expected results of this change.

On February 2, 2006, USDA received a petition from the animal concern group In Defense of Animals, requesting that APHIS create policy to address the specific needs of elephants with respect to foot care and arthritis. It is the contention of the petitioners that lack of space and inadequate substrate (flooring/ground type) have created a high incidence of chronic foot care problems and subsequent development of arthritis in

elephants held in captivity. The petition focuses on zoos and the enclosures used for elephants.

Currently under the Animal Welfare Act (AWA), APHIS requires that elephants receive adequate veterinary care and that their enclosures provide sufficient space for normal social and postural adjustments. The petitioners want APHIS to use policy, referred to as an interpretive rule, to make specific engineering standards for elephants that address increased space requirements and use of softer substrates. The petitioners also want APHIS to confiscate elephants from any facility that has chronic foot problems and arthritis in these animals and then place the animals at sanctuaries.

Before consideration of what can be done under the AWA, APHIS needs to collect additional information, focusing on the current professionally accepted practices and standards, broad-based input of opinion and fact, and, most importantly, valid scientific information. To this end, we are publishing the petition in its entirety and requesting comments on the petition, the issues put forth in the petition, and other elephant care related issues. After reviewing the collected information, APHIS will make an informed response to the petition.

- b. Briefly discuss other issues associated with this rulemaking, including any significant changes in program operations; effects on other Federal agencies and State and local governments and the extent of any related consultations; alternatives considered; time pressures (state here if docket needs to be published by a specific date and why); and why the regulatory action is important, sensitive, controversial, or precedent setting.

The issue of elephant welfare is usually a highly important focus in the public eye as well as a major issue with several animal concern groups. Any problems with these animals tend to make high profile situations. Current AWA regulations concerning elephants are general in nature and are considered performance-based standards. This is the approach of Part 3, Subpart F, of 9 CFR, since that subpart addresses all animals not included in Subparts A - E (dogs, cat, rabbits, hamsters, guinea pigs, nonhuman primates, and marine mammals). This situation leaves our enforcement subject to outside interpretation.

APHIS wishes to address whether specific needs for elephants, as outlined in the petition, have any basis in scientific fact and whether the AWA regulations can address these needs more effectively. There will be no significant change in our operations as a result of this notice and request for comments.

- c. Name, title, telephone number and e-mail address of agency contact:

Dr. Barbara Kohn, Senior Staff Veterinarian, USDA, APHIS, Animal Care, 4700 River Road Unit 84, Riverdale, MD 20723-1234; 301-734-7833.

- 
5. Briefly discuss the potential economic effects of this action, including benefits and costs, economic effects on small entities, and budgetary effects. For information or assistance, contact Policy Analysis and Development, PPD: (301) 734-8667.

This notice would have no economic effects on the regulated community. We are currently just requesting information and documentation of valid scientific information.

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6. If this action is based on a consideration of plant or animal pest or disease risk, it may need to be supported by risk documentation (e.g., a risk assessment, risk analysis, and/or risk management document). Please indicate whether such documentation has been prepared, identify it, and state where a copy may be obtained. For information or assistance, contact Risk Analysis Systems, PPD, (301) 734-8017.

N/A

- 
7. Agencies must consider the potential environmental effects of a regulatory action, including effects on human health.

- a. Is this action based on a consideration of plant or animal pest or disease risk, including means of avoiding or mitigating risk? \_\_\_ yes X no

If yes, APHIS procedures in 7 CFR part 372 for implementing the National Environmental Policy Act (NEPA) generally require that an environmental assessment (EA) be prepared, although there are exceptions (e.g., pest or disease risks are de minimis).

Please contact Environmental Services, PPD, at (301) 734-8565, for advice on whether an EA should be prepared and assistance with preparation or, alternatively, assistance in documenting why an EA is not necessary.

Please check one of the following:

\_\_\_ An EA is being or has been prepared by ( name ).

\_\_\_ A document has been prepared explaining why an EA is not needed.  
(Please attach document signed by preparer.)

- b. Other environmental requirements, including Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," and Executive Order 13045, "Protection of Children from Environmental Health Risks

and Safety Risks," may also apply. For information and assistance, contact Environmental Services, PPD, (301) 734-8565.

Please check one of the following:

I have consulted PPD-ES or other environmental specialist (name) and no other environmental documentation is required.

I have consulted PPD-ES or other environmental specialist (name), and (name) is preparing documentation to address (executive order or other requirement).

- 
8. Will this action affect the importation of articles into the United States or the interstate movement of articles that are also traded internationally?  yes  no

If yes, please answer the following questions. For advice or assistance, contact the Trade Support Team, (202) 720-7677.

- a. Is this action consistent with U.S. obligations under the World Trade Organization Agreement on Sanitary and Phytosanitary Measures, including the principles of transparency, equivalency, and regionalization?
- b. Is there an international standard relevant to this action? If so, please cite [OIE, IPPC, NAPPO] [article/provision/chapter].
- c. Is this action consistent with any international standard cited above? (Leave blank or type N/A if there is no relevant international standard.)
- d. If the answer to question (a) or (c) is no, please explain.

- 
9. Executive Order 13175, Consultation and Coordination with Indian and Tribal Governments, states that agencies must consult with Indian tribal governments about any new regulations that may have substantial direct effects on them and their members. Will this rule regulate an area that may include tribal lands or regulate articles used by tribes on their lands? For more information, contact Rick Wadleigh, APHIS Native American Program Coordinator, at (202) 720-8127 or (303) 324-9519, or a headquarters representative of the APHIS Native American Working Group (directory at <http://www.aphis.usda.gov/anawg/staterep.html>).

No

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10. The Paperwork Reduction Act of 1995 requires agencies to obtain approval from the Office of Management and Budget before implementing any new information collection requirements. Will this rule require the submission of information or recordkeeping? If so, please contact Forms, Issuances, and Records Management (FIRM), MRPBS, at (301) 734-7477. FIRM can advise you of whether OMB approval will be required and explain the process for obtaining it.

No

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11. State briefly what sections of the CFR will need to be changed as a result of this action: (It is not necessary to show how the sections will be amended.)

N/A

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12. If this action is related to functions transferred from APHIS to the Department of Homeland Security, describe any new activities DHS will need to undertake to carry out or enforce this change, describe the types of locations where the new activities will occur, and estimate whether the new activities are likely to require significant increases in personnel, equipment, or other expenses. For information or assistance, contact:

- For plants or plant products: Assistant Director for Regulatory Coordination, PPQ, at (301) 734-8790.
- For live animals, embryos, or semen: Director, Select Agent, Organisms and Vectors, and Animals at (301) 734-3277.
- For animal products or byproducts: Assistant Director, Veterinary Regulatory Support, PPQ, at (301) 734-7633; or Director, Technical Trade Services Team--Byproducts, VS, at (301) 734-3277.

N/A

- 
13. What other APHIS staffs (or units outside APHIS) should be made aware of or involved in this regulatory change? Please list those to which RAD should send a copy of the workplan. Be as specific as possible (e.g., list a specific name/staff rather than PPQ or VS).

U.S. Fish and Wildlife Service

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Please route a paper copy of this workplan in accordance with the cover sheet. Please send an electronic copy of this workplan to RAD c/o Wanda L Moore/MD/APHIS/USDA.

**CITIZEN PETITION BEFORE THE  
UNITED STATES DEPARTMENT OF AGRICULTURE**

<b>IN DEFENSE OF ANIMALS</b>
Petitioner,
v.
<b>MIKE JOHANNIS</b>
Secretary of Agriculture
Respondent

**DECLARATION OF MICHAEL SCHMIDT**

I, Michael Schmidt, hereby declare:

1. I have twenty-five years experience as a veterinarian for zoo animals. During my career as a zoo veterinarian I specialized in the care and breeding of elephants in zoos and I have also done research with timber elephants in Asia. I started working as a veterinarian in the Portland, Oregon Zoo in 1973. I left in 1998 because I believed that, due to management problems within the organization, I was no longer able to be effective in administering first-rate veterinary care to the animals. The year after I left the zoo, it was cited by the U.S. Department of Agriculture for abusing an elephant and for failure to provide prompt veterinary care. I do not plan to work for a zoo again.

2. Life in the zoo causes a number of significant problems for elephants. Chronic foot diseases are the number one danger and cause of suffering and premature death for zoo elephants. As elephants get older, the foot problems they acquire from years of living in the zoo tend to reoccur, become chronic and worsen, eventually taking

5. Even though the larger safari-style animal parks have additional outside terrain that makes them better than traditional zoos, elephants living in them still spend the major part of their lives indoors in a small holding area where they are often chained in place at night after the zoo keepers have gone home. Elephants spend about 16 hours a day in holding areas, and when it is cold outside they spend all day inside. Even if an elephant is let outside, it will be bored because the quality and quantity of space provided for it still fall significantly short of being able to meet the elephant's biological and behavioral needs.

6. A main reason zoo elephants have foot problems is due to the use of concrete floors. In the wild, elephants walk on grass, mud, clay, and sand. These surfaces give under their feet and their toenails dig into the earth. This allows their feet to wear normally. A concrete floor has no give and thus, the elephant walks flat footed. There is abnormal wear on the elephant's feet. As a result, the feet and nails of zoo elephants require regular corrective trimming. Due to the daily abuse to the feet, the elephants' feet become chronically infected by bacteria and fungi. My experience has shown me that concrete flooring injures and kills elephants.

To summarize: in the zoo, over time, the daily accumulation of damage from standing and walking on flat concrete floors tends to cause joint injury and predisposes the elephant's feet to infection from abnormal wear. As the joints and feet become progressively injured by life spent on a concrete floor, the pain the elephant feels makes it reluctant to move around as much on its sore legs and feet. This creates a vicious circle and downward spiral of pain, followed by less movement, causing further injury, causing more pain, causing even less movement, etc. It is a continuous, gradual

suggested that the flooring be covered with sand. This would have allowed the elephants to walk normally and provide a cushioning effect to help their joints, and would give them a comfortable place to lie down. Also, indoor sand absorbs urine and dries out dung making it possible for the elephants to avoid their own wastes; thus reducing the exposure of their feet to injurious bacteria and fungi. It is a well-understood principle in the dairy industry that providing a natural substrate instead of concrete is a proven tactic for eliminating the chronic foot problems found in cattle kept on concrete flooring.

11. Despite thousands of man-hours of treatments and tens of thousands of dollars of applied medications, four adult elephants died as a consequence of foot disease during my tenure as the veterinarian at the Portland Zoo. I believe that these elephants would still be alive today if they had been left in the wild.

12. Elephants in zoos also have arthritis which is caused primarily by spending their lives on concrete floors. The elephants' joints do not give when they walk on concrete and thus their joints must do the extra giving. This results in cumulative damage to their joints. Zoo elephants also do not get normal exercise that they would get in the wild. This lack of exercise and lack of normal joint movement causes damage to their joints and contributes to arthritis. As noted above, arthritis exacerbates foot problems in zoo elephants.

13. Rather than zoos preventing and eliminating the conditions that cause the problems to elephants' feet and joints (such as getting them off the concrete floors), zoos have instead come up with a variety of chronic treatments for combating the foot problems.

14. When elephants can live in a zoo designed to meet their biological and

floors, compacted soil and lack of space. As long as elephants languish in zoos, their lives are in jeopardy.

10. I also believe that climate conditions are connected to the space issue and thus, the health of the animal. Elephants that live in a cold and wet climate will have to be kept in stalls all winter. Several factors go into determining whether elephants should be let outside. These factors include looking at the sustained temperature (approximately 40 to 50 degrees is the lower limit for letting elephants go outside), precipitation, wind and humidity. I believe that elephants should not be exhibited at any zoo where the elephants have to be kept indoors for over twenty days out of the year.

11. Elephants housed in northern zoos, suffering from inadequate exercise, also exhibit stereotypic behavior (repetitive behavior). Examples of stereotypic behavior include, head bobbing, perpetual swaying (exaggerated), male masturbation, females pulling on teeth (elongates teeth), and sticking trunk in between tusk (wears off hair). Stereotypic behavior also causes foot problems such as nail cracks, abscesses, and abrasions to the sole of the foot.

12. Due to the severe health problems suffered by elephants in northern zoos, I believe that no elephants should be kept in northern zoos. As a result of living in a northern climate and having to keep elephants inside, or warehousing the elephants for the winter, the amount of space elephants have to move is severely limited. I believe that the elephants' foot problems will not be alleviated in northern zoos. The problem will only get worse.

13. Next, the AZA standards for elephant enclosures are far from adequate. These standards are comparable to putting a 100 pound Labrador dog into a 5 feet by 6

need their family, their friends and space. No artificial situation can give an elephant what it needs in terms of space, for 100 miles is a mere stroll for these animals.

4. The adequate space for elephants consists of hundreds of square miles. For example, our ten year old bull covered 100 kilometers in a day and over 90 the very next day. Elephants are capable of covering vast distances. Dr. Ian Douglas Hamilton has tracked elephants' movements for many years and found that some utilize enormous home ranges, while others need less. However, less for an elephant is still something that cannot be equated in captive terms.

5. Consider this – life imprisonment is the most severe punishment we humans mete out to transgressors, and life imprisonment for an elephant is the same. It frustrates inherent instinct, and the genetic memory with which elephants are endowed at birth, and turns them psychotic. The kindest thing any human can do for a captive elephant is to set it free, allow it access to the stimulation of others, and even though one cannot give it adequate space in elephant terms, at least give it a larger place to live out its life than life imprisonment in a zoo. I believe that we will live to see the day that keeping elephants in zoos will be banned entirely. It is cruel and unethical, and there is nothing educational in looking at a miserable captive in an unnatural setting. I strongly supported the closing down of the elephant exhibit at the San Francisco Zoo.

6. I agree that USDA needs to clarify its Animal Welfare Regulations requiring adequate space and conditions for elephants. USDA also needs to regularly and consistently inspect and monitor the health of elephants at zoos. When the agency finds that elephants are not healthy due to inadequate space and conditions, USDA needs to require the zoo to either alter the space and conditions to improve the health of the animal

**CITIZEN PETITION BEFORE THE  
UNITED STATES DEPARTMENT OF AGRICULTURE**

IN DEFENSE OF ANIMALS	)
	)
Petitioner,	)
	)
v.	)
	)
MIKE JOHANNNS	)
Secretary of Agriculture	)
	)
Respondent	)

**DECLARATION OF PAT DERBY**

I, Pat Derby, hereby declare:

1. I have been working with elephants for 35 years. I did not like how other people handled animals so I started my own sanctuary at the Performing Animal Welfare Society (PAWS). I am the director and founder of PAWS.

2. PAWS is a nonprofit organization that is recognized internationally for its leadership in the protection of captive wildlife. PAWS provides a peaceful sanctuary for abused, neglected, and abandoned animals and promotes national and international programs to gain permanent protection for all captive wildlife.

3. We have a sanctuary in Galt, CA and in San Andreas, CA. Galt's elephant area has 4 acres and is much bigger than most zoos. The Galt sanctuary consists of flat pastureland covered with green grass and the terrain is very soft clay. The San Andreas sanctuary (ARK 2000) has 2,300 acres and is rockier and consists of rolling hills and grass. This sanctuary has two barns that are each 20,000 square feet with hydraulic gates,

8. Lulu is a 39 year old female African elephant from the San Francisco Zoo. She was never managed through the free contact method; therefore, she was never chained. She lived in a small space on concrete flooring but she had freedom to move through the enclosure and the barn. She has not had foot or joint problems since living at PAWS.

9. Annie is a 49 year old female Asian elephant who came to the sanctuary in 1994 from the Milwaukee County Zoo. She had lived most of her life confined in a small space and much of the time she was chained. When she arrived at the sanctuary, she had major foot problems and she suffered from arthritis. Her condition began to improve at the Galt Facility where she was allowed to roam free on 1.5 acres of all natural substrate. She's now at the ARK 2000 Sanctuary and has a very large area to exercise and she walks on natural substrate. Her condition has greatly improved.

10. Minnie is a 50 year old female Asian elephant who traveled with the circus most of her life. She had fairly chronic joint problems and a very stiff right front leg when she arrived. Her condition has greatly improved since she's been at the sanctuary.

11. Rebecca is a 43 year old female Asian elephant from the circus. She did not have any noticeable foot or joint problems and she moves well.

12. Winky, 53, and Wanda, 47, are female Asian elephants from the Detroit Zoo. Both elephants have foot abscesses and suffer from arthritis. Since arriving at the sanctuary in April, both elephants' foot and joint conditions have improved greatly, even according to their Detroit Zoo keepers.

17. The AZA never threatened the Milwaukee County Zoo with revocation of its accreditation for the transfer of Lota or for the zoo's inhumane training sessions which were documented on videotapes. After viewing the videotapes, the Milwaukee County Executives mandated that the two remaining elephants, Tammy and Annie, be transferred to the PAWS sanctuary in Galt, CA. Tammy and Annie came to the sanctuary in 1995.

18. PAWS staff and veterinarians developed a daily regime of foot soaks and treatment for Tammy's foot problems and arthritis. After living at the sanctuary, both elephants began to exhibit natural behaviors and vocalizations that were unfamiliar to the Milwaukee zoo staff who mistook the sounds as anger.

19. Tammy died in 2003 at the age of 53 of degenerative joint disease, a common and fatal ailment of zoo elephants. Annie, age 49, now lives at the sanctuary in San Andreas, CA.

20. Furthermore, PAWS is outraged over the death of Tatima, an African elephant, at the Lincoln Park Zoo. Tatima and her companions, Peaches and Wanki (who have also recently died) were transferred to this zoo from the San Diego Zoo. Several elephant scientists opposed the move due to the concern that the drastic change in space and climate would adversely affect the elephants' health. I do not believe that elephants should be in northern zoos because of the amount of days elephants have to stay indoors.

21. Although the stated cause of Tatima's death is a viral disease, I find it odd that the elephant lived for many years with no symptoms of this disease at the San Diego Zoo and that the disease was not diagnosed before she died.

22. Elephants kept at many AZA accredited zoos suffer from foot and joint problems yet as shown by the above examples, when the elephants are transferred to

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v.	)
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MIKE JOHANNNS	)
Secretary of Agriculture	)
	)
Respondent	)

**DECLARATION OF CAROL BUCKLEY**

I, Carol Buckley, hereby declare:

1. I am the co-founder of The Elephant Sanctuary in Hohenwald, Tennessee. It was founded in 1995 and is the nation's largest natural habitat refuge developed specifically for the rehabilitation of endangered African and Asian elephants living in captivity. It is a non-profit organization and is licensed by the U.S. Department of Agriculture and the Tennessee Wildlife Resources Agency.

2. The purpose of this sanctuary is to provide rehabilitation for old, sick, or needy captive elephants that have been retired from circuses and zoos in a setting of green pastures, old-growth forests, spring-fed ponds and a heated barn for cold winter nights. The Sanctuary also provides education about the crisis facing these social, sensitive, passionately intense, playful, complex, exceedingly intelligent and endangered creatures.

7. Here is a description of the elephants at this sanctuary who suffered foot and joint problems before coming to the Sanctuary and the improvements they experienced as a result of living at the Sanctuary:

- (a) Tarra performed in circuses and zoos before coming to the Sanctuary. After performing for 21 years, she retired and became the first resident of the Sanctuary. Before coming to the Sanctuary, she suffered from periodic arthritis in her right wrist. I have not seen this condition since her arrival. Tarra is extremely active; walking miles each day, traversing steep hills and swimming in ponds and streams.
- (b) Jenny performed with the circus before coming to the Sanctuary. She arrived with an injury to her knee that was caused by an attack by a bull elephant. She also was severely underweight and had developed chronic foot rot which is life threatening if left untreated. Due to these injuries, Jenny's "owner" could no longer use her in the circus so he dumped her at an animal shelter outside of Las Vegas, NV. Unfortunately, her condition did not improve at her new home where she was exposed to below-freezing temperatures at night and kept in chains due to the inadequate facilities. Her leg injury and foot rot went untreated. The television show, 20/20 did an expose' on captive elephants. Jenny was prominently featured in the story. The footage documented Jenny standing in feces, strikingly underweight, living in dilapidated facilities, and receiving inadequate care from unknowledgeable keepers. Fortunately, Jenny's "owner" allowed her to be transferred to the Sanctuary. Her knee injury is permanent but her strength and ability to walk, run, and play has increased significantly. She is

industry standard) and homeopathic remedies. Within six months, the foot infections that she had suffered from for 20 years had healed. I believe that getting her off of concrete and onto more yielding natural surfaces not only allowed her feet to recovery but prevented the problem from reoccurring. The Sanctuary environment has reversed a condition that would have eventually cost Bunny her life.

- (e) Over a thirty year period Sissy lived in several zoos, most of that time alone. She came to the Sanctuary after being brutally beaten by her keepers at the El Paso zoo. While at the zoo, Sissy had a chronic split nail, the result of improper foot trimming. After she arrived at the Sanctuary, her split nail was allowed to grow out. Within six months, with proper corrective trimming, her split nail was healed and did not reoccur.
- (f) Winkie lived in a zoo before coming to the Sanctuary. For over 30 years, she was kept indoors, on chains, six months out of the year. She underwent exploratory surgery for a problematic toe in which the vet, suspecting that a foreign object was embedded in the foot, cut her foot to the bone. The surgery was extensive but failed to produce any foreign objects. It was later determined that Winkie's problem was not an object in her foot but an infection in one of the bones of her foot. Due to an antiquated elephant exhibit, a lack of funds to rehabilitate the exhibit, and a request by USDA to improve the exhibit or relocate their elephants, the zoo sent Winkie to the Sanctuary. Upon arrival to the Sanctuary, it was determined that Winkie suffered from osteoarthritis and osteomyelitis (bone infections in her feet). After several months of foot soaks the infection was no

improved and she is now navigating terrain that she was incapable of navigating in the past.

- (i) Misty was owned by the Hawthorn Corporation and performed in the circus for nearly 40 years before coming to the Sanctuary. She was released to the Sanctuary because she had tested positive for the human strain of tuberculosis. In addition to her contagious disease condition, Misty had severely overgrown nails, unhealthy skin and she was overweight. She was placed in quarantine where she will remain until her treatment is complete.

8. These examples demonstrate that adequate space and conditions are an important requirement for the health of captive elephants. The evidence shows that elephants that come to the Sanctuary with foot problems recover due to the vast amount of space that they have access to as well as improved living conditions which reflect a more natural environment, much like what they would experience in the wild.

9. I agree that USDA needs to clarify its Animal Welfare Regulations requiring adequate space and conditions for elephants. USDA also needs to regularly and consistently inspect and vigorously monitor the health of elephants at zoos. When the agency finds that elephants shows signs of atypical behavior, osteomyelitis, osteoarthritis and other health hazards resulting from inadequate space, confinement, and harsh living conditions, USDA must require that the zoo either increase the available space and improve conditions to address the health of the elephant or move the elephant from the zoo to an environment, such as a Sanctuary, where the elephant's health can improve.

10. In accordance with 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

**CITIZEN PETITION BEFORE THE  
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IN DEFENSE OF ANIMALS	)
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MIKE JOHANNIS	)
Secretary of Agriculture	)
	)
Respondent	)

**DECLARATION OF HENRY MELVYN RICHARDSON, DVM**

I, Henry Melvyn Richardson, DVM, hereby declare:

1. I have over 36-years of experience working with elephants and other animals. For the past 23 years, I have been a veterinarian working with exhibited animals, wildlife, and domestic animals.

2. I was a staff veterinarian at the San Antonio Zoo, Woodland Park Zoo, and the International Animal Exchange (IAE). At IAE, I administered veterinary care to over 2,500 exotic animals housed at The International Wildlife Park in Grand Prairie, Texas. I also represented and consulted for IAE to clients in Colombia, SA; Taipei, Taiwan; and Seoul, S. Korea.

3. On January 4, 2006, I was asked by In Defense of Animals (IDA) as well as Friends of Toni to visit the National Zoo and meet with John Berry, the zoo's new director concerning the condition of Toni, their 40 year old Asian elephant (*Elephas maximus*). There

weight loss was due to her being just a picky eater. When I watched Toni in her exhibit she appeared to relish her bamboo, which was obviously placed in the yard to draw her out.

8. He explained that the other elephants were thriving in the exhibit. I informed Mr. Berry that Ambika was also being treated with ibuprofen according to the medical records. He was unaware of that. We ended the meeting with Mr. Berry assuring us that Toni was receiving excellent care. He articulated The National Zoo's commitment to continue to exhibit and breed elephants.

9. Mr. Berry's statement that Toni's condition is due entirely to her left forelimb injury at Scranton appears at odds with current scientific knowledge of elephants. He even stated that her twisted stance was in compensation for this injury. Elephants in the wild have sustained fractured legs and even ankylosed carpal joints, like Toni. They have been seen to recuperate and go on to live almost normal elephant lives, albeit with a limp. Had Toni had access to an adequate environment with enough space to roam and a natural substrate, I am certain that she could have better dealt with her injury and would not be in such a condition as today. Toni's exhibit only allowed for exacerbation of her injury. Lack of exercise caused muscle atrophy, removing the muscular support needed to sustain healthy joints and standing on concrete increased the trauma to joint surfaces initiating degenerative joint disease while walking on sand literally rubbed down her pads, thinning her soles and increasing her pain. We will never know for sure; but I believe if Toni had been sent to a sanctuary when she left Scranton, she would not be suffering today.

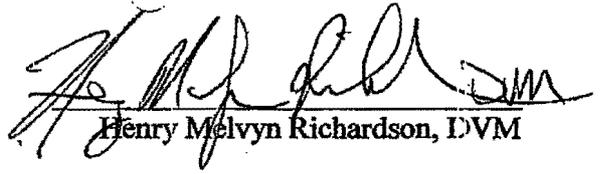
10. In December 2005, I was given access to Toni's medical records, as well as the records of the other elephants at the National Zoo. I was painfully aware of her medical problems: her chronic arthritis in her left forelimb caused by an old injury at the Scranton Zoo in

records indicate this very stance as well by stating that her weight is shifted to her rear end, front legs extended forward resting on her front heels. I have also seen pictures taken of her in September that show her standing with her weight shifted to the rear legs as well.

13. The First North American Conference on Elephant Foot Care and Pathology was held in Beaverton, Oregon, March, 1998. The publication, The Elephant's Foot, Prevention and Care of Foot Conditions in Captive Asian and African Elephants, (Blair Csuti, et al., eds., 2001) resulted from that meeting. In the introduction it states that "Foot problems are seen in 50 percent of captive Asian and African elephants at some time in their lives...may result in serious disability and death." (Id. at vii). It goes on to state "There is a general consensus that lack of exercise, long hours standing on hard substrates, and contamination resulting from standing in their own excreta are major contributors to elephant foot problems . . . All contributors [to the meeting] also agree that prevention of foot problems is preferable to treatment." (Id.). It is important to keep in mind that elephant "foot problems" over time will lead to debilitating arthritis and degenerative joint disease, and vice versa.

14. Whenever possible, we as veterinarians are trained to prevent pain and suffering, not just treat it. The question here is why are the veterinarians at the National Zoo not preventing the painful degenerative arthritis in their elephants like Toni and Ambika? The answer is that they cannot because the cause of the crippling degenerative joint disease is the exhibit itself: the concrete; the packed unyielding abrasive substrate inside and outside; the lack of exercise and normal use of the elephants feet and limbs – climbing, digging, walking, wading into streams, kicking logs, and foraging. Some zoo professionals have gone on record saying elephants are basically lazy and if their food is placed in front of them they will not exercise.

Executed on: January 25<sup>th</sup>, 2006

  
Henry Melvyn Richardson, DVM

Tsavo, Queen Elizabeth and Mikumi) for a report to Convention on International Trade in Endangered Species (CITES).

5. In 1989 I co-authored the successful Tanzanian proposal to CITES to move the African elephant from Appendix II to Appendix I of the Convention.

6. I worked as Elephant Programme Coordinator for Kenya Wildlife Service between 1990-1994, where I was responsible for the conservation and management of the country's 25,000 elephants and for training a team of 11 Kenyan graduates.

7. Since 1998 I have studied the communication and social behaviour of elephants in the Laikipia, Mara and Amboseli populations. Since 1975 I have been a member of the AERP, since 2000 I have been a Director of ElephantVoices and since 2002 I have been the Director of Research of AERP.

8. I have observed Asian elephants in the wild in India and in Sri Lanka including recording their vocalizations and behaviour.

9. I am on the Scientific Advisory Board of the Captive Elephant Management Coalition, I am on the Scientific Advisory Panel for the Amboseli Trust for Elephants and I am a member of Ethologists for the Ethical treatment of Animals.

10. I have visited numerous captive elephant sites including zoos in Europe and the United States (eg. Disney's Wild Kingdom, National Zoo, Bronx Zoo, Minneapolis Zoo, Portland Zoo, London Zoo, Oakland Zoo, the Lincoln Park Zoo and the Brookfield Zoo).



available to them they do not walk so far. While it is true that elephants walk straight lines when moving from point A to point B, and that they will cover less area in habitats with high resource availability, it is a fallacy to argue that because elephants have food, water, security and semen presented "on a plate" or "in a tube" in captivity they, therefore, don't need more than 2,200 sq ft of space. This is the amount that the American Zoo and Aquarium Association (AZA) currently recommend.

17. The AZA and other members of the zoo community maintain that there is no scientific evidence that elephants require ample space in captivity and suggest that elephants only move in the wild because they have to. I am stunned by this conclusion because the empirical evidence consistently shows that elephants need much more space than what is currently allotted to them in zoo settings.

18. Elephants in zoos currently face numerous health, reproductive and behavioral problems requiring enormous costs and frequent interventions for veterinary treatment, hormone sampling, electro-ejaculation and artificial insemination. In the form of the routine problems that captive elephant managers face every day, the empirical evidence that elephants need more space is unmistakable: foot diseases, arthritis, weight related diseases, infertility, heightened aggression, and other neurotic behavior to name but a few.

19. Based upon many years of field research, it is my professional opinion that wild elephants do not suffer the same ailments, such as foot disease, arthritis, and weight related diseases, as elephants in captivity. By comparison, in Amboseli, where the life histories of over 2,000 free-ranging elephants have been followed for 34 years and where elephants grow up in a nurturing social environment, have the freedom to move, and



27. The absurdity of members of the AZA's consistent argument regarding space is apparent when it is applied to humans. By AZA standards, a person, (being approximately 2% the weight of an elephant), would lead a healthy life living in 44 sq ft, if provided with food, water and breeding partners.

28. The 39-year old Asian elephant named Toni at the Smithsonian Institution's National Zoological Park (National Zoo) is a clear example of how intense zoo confinement can cause severe health problems for an elephant.

29. On January 4, 2006, I visited the zoo and observed Toni in her exhibit. The National Zoo's elephants are all Asian elephants, a species that inhabits forest and forest-edge habitats in its natural environment. The National Zoo's barren exhibit couldn't be further from tropical forest; rather the exhibit is striking in its bleak desert-like condition.

30. Prior to visiting the zoo, I was informed that 39-year-old Toni had severe arthritis, but I was not prepared for what I witnessed at the enclosure. In all my 30 years of observing wild elephants, I have never seen an elephant as crippled as Toni.

31. Almost 20 years ago, at the Scranton Zoo, Toni suffered a broken left ankle. Years of standing on concrete floors and compacted sandy soil in a small enclosure, with little exercise have exacerbated this injury, for she is now almost unable to walk. Toni shuffles along, only centimeters at a step, with her weight shifted onto her hind legs. It appears that she has compensated the pain and arthritis in her left front ankle by trying to shift her weight to her hind legs, thus giving relief to her injured front leg. Over the years of shifting her weight, the muscles on Toni's left side have atrophied, and



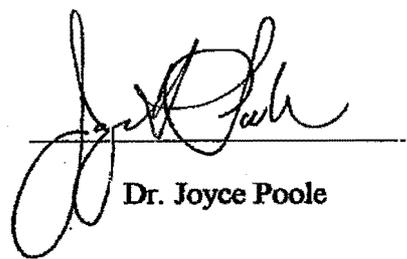
contributed to Toni's deteriorating health and thus, this zoo cannot escape responsibility for Toni's condition.

35. My long-term behavioral research on wild elephants indicates that these large, highly social and intelligent animals require ample, environmentally complex space, and a sufficient number of other elephants for social contact and learning.

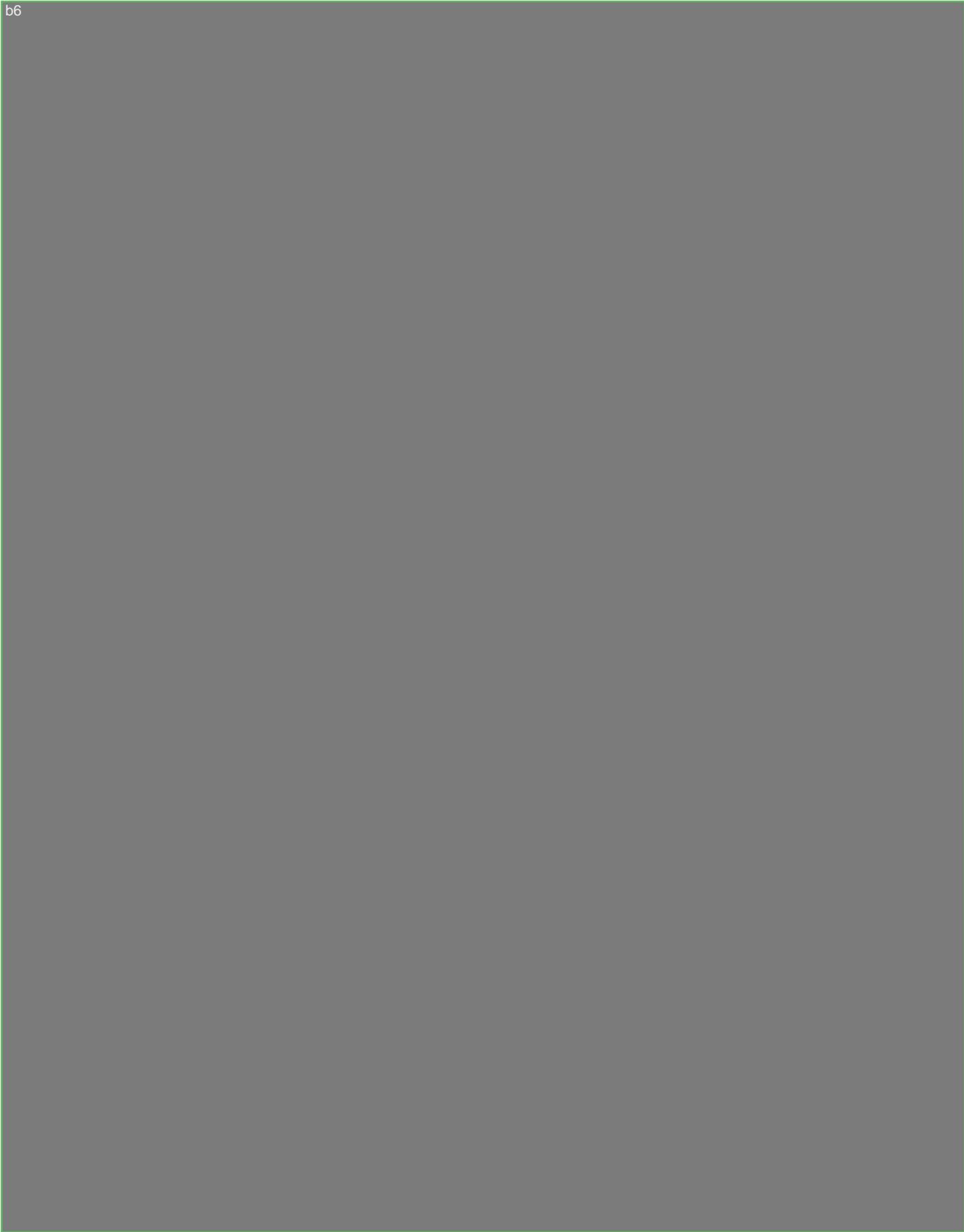
36. I agree that USDA needs to clarify its Animal Welfare Regulations requiring adequate space and conditions for elephants. USDA should be spearheading the effort to educate zoos on what is inadequate space and conditions for elephants. USDA also needs to regularly and consistently inspect and monitor the health of elephants at zoos. When the agency finds that elephants are not healthy due to inadequate space and conditions, USDA needs to require the zoo to either alter the space and conditions to improve the health of the animal or move the elephant from the zoo to an environment, such as a sanctuary, where the elephant's health can improve.

37. In accordance with 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

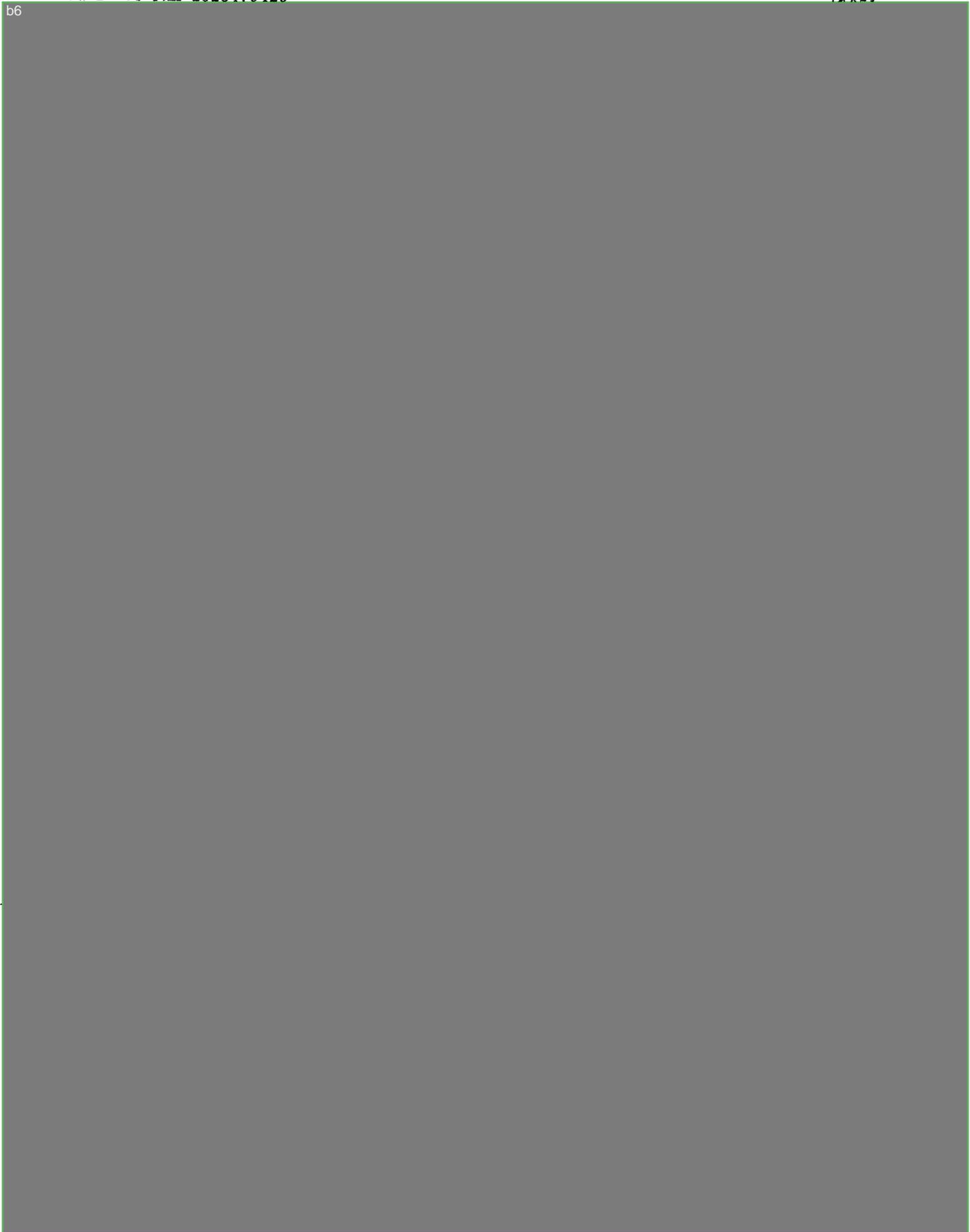
Executed on: 27 Jan, 2006

  
Dr. Joyce Poole

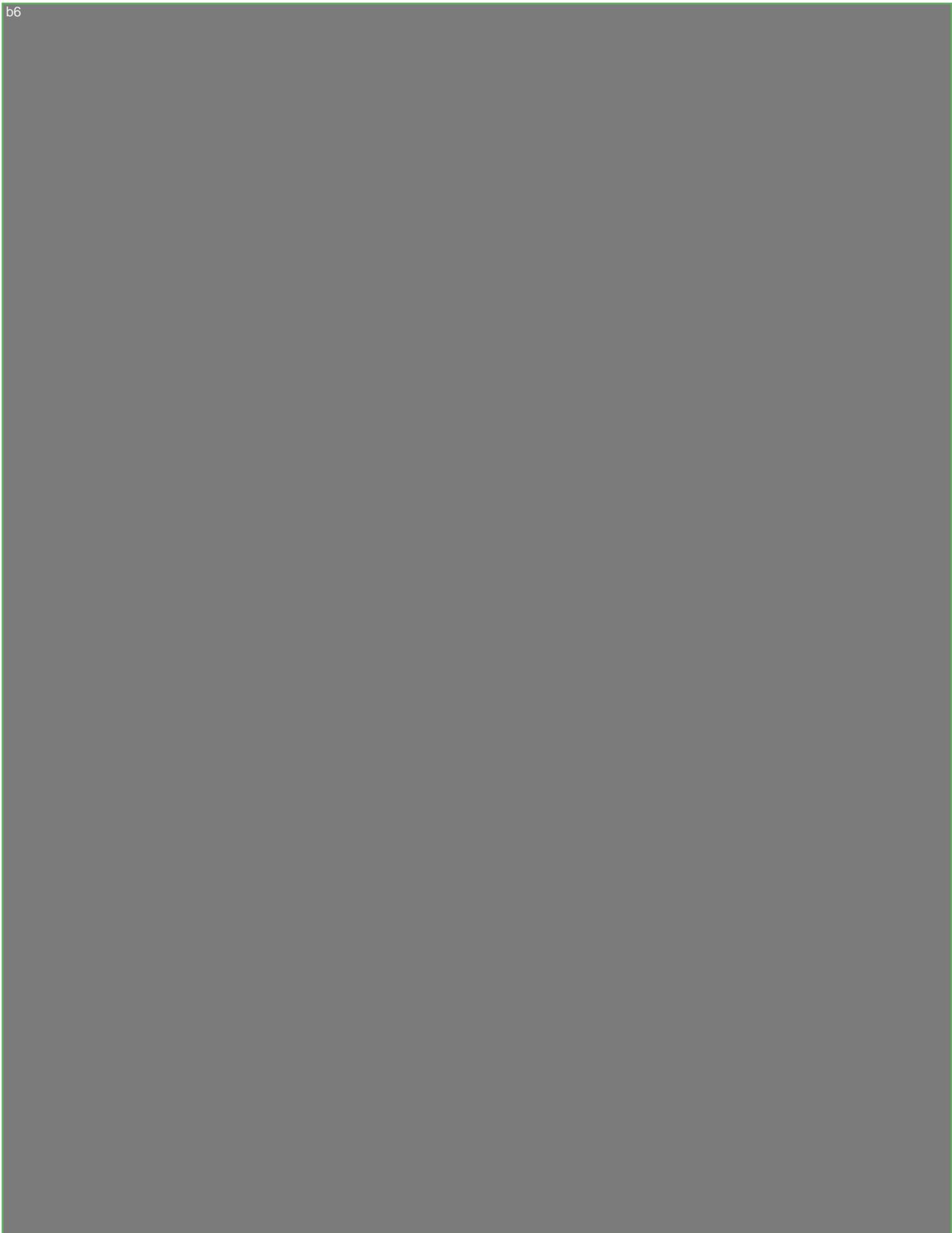
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IN DEFENSE OF ANIMALS

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1 June 2006

Dr. Chester Gipson  
Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
4700 River Rd, Unit 84  
Riverdale, MD 20737-1234

***RE: Clarification to Addendum to In Defense of Animals Citizen Petition (Feb. 2, 2006) Before the USDA Seeking An Interpretive Rule and Enforcement Under the Animal Welfare Act to Eliminate Violations of the Space and Conditions Regulations for Elephants at Zoos***

Dear Dr. Gipson:

Enclosed please find a copy of the complaint about conditions for elephants at the St. Louis Zoo, originally submitted by IDA on 14 March 2006 as an addendum to our Citizen Petition regarding violations of space and conditions regulations for elephants at zoos.

Upon review of the complaint, we have identified three areas that required clarification or correction. IDA is resubmitting the complaint, with the clarified sections indicated in bold face. In addition, we are including with this submission:

- Expanded excerpts from medical records at the St. Louis Zoo. (Actual records are posted at [http://www.help elephants.com/st\\_louis\\_zoo.html](http://www.help elephants.com/st_louis_zoo.html)).
- Photographs of elephants at the St. Louis Zoo.
- Videotape of elephants at the St. Louis Zoo
- DVD containing revised complaint, medical records excerpts, photographs, and full text of medical records.

Thank you for your consideration.

Sincerely,

b6



## **General Overview**

The St. Louis Zoo ("SLZ") houses **six female** Asian Elephants; Clara, Sri, Ellie, Rani, Donna, and Pearl, and one male Asian Elephant; Raja. In addition, a seventh female, Carolyn, died at the facility in April 2000. Foot and/or joint problems have been reported in the medical records for **6 of the 7** elephants. Joint and foot problems are also noted in the necropsy of the 8<sup>th</sup> elephant, Carolyn.

## **Exhibit and Holding Space-**

The zoo's Elephant Management Facility is a 13,000 square-foot holding area with 6,720 square feet of indoor space divided into 8 stalls and corridors for shifting. The barn is kept at 55-60 degrees Fahrenheit year round through gas circulating heat. All floors are concrete and unheated.

The zoo's outdoor exhibit area totals 53,860 square feet. One of the exhibits is smaller and is only used to house cows or calves and the other two are capable of housing bulls. The largest exhibit is just a .5 acre (23,250 square feet) yard.

## **Elephant Health Problems -**

All but one of the elephants currently alive at the St. Louis Zoo has experienced foot problems, lameness and/or joint disease. An eighth elephant who died at the zoo in 2000 also suffered from foot irregularities and arthritis.

The medical records demonstrate that SLZ personnel continue to treat the symptoms of these problems by administration of antibiotics and painkillers, foot soaks and cutting necrotic (dead/rotting) tissue from the feet, without ever addressing the cause of the problem – the lack of space, exercise, confinement indoors during the winters and the concrete-floored barn.

Records indicate that SLZ personnel are aware that confinement indoors (where the floors are

## Clara

Clara, 52-years old, has experienced numerous foot and limb problems, including recurring abscesses of both back feet for at least five years (the records only begin in January 2000).

Clara's left foot appears to have been abscessed for five years. Her right foot abscess appears to have lasted for three years, but then reoccurs a year later. Her left foot ends up with a serious defect – a 1.5 x 5 cm fissure near her middle toe.

Clara has also suffered from decubital sores (bedsores) on the left side of her face, her left elbow and left hip as a result of “prolonged recumbency” (laying down a lot) presumably due to foot pain.

Clara wears sandals on both back feet due to the chronic abscesses. Prior to the sandals, a boot was placed on Clara's abscessed left foot. A note in the records from April 2000 indicates that when a boot was first placed on this foot, Clara removed it and “rubbed sole on chain until moderate hemorrhage.” Chaining of course would only worsen Clara's problem and the fact that she rubbed her foot to the point of hemorrhage is an indication of the degree of discomfort she has experienced.

**Notes indicate that Clara has arthritis as well. Her left leg has had a problem with swelling. Signs that Clara is in pain include direct mention of pain in the medical records: “arthritis pain” on 8/1/01, and “pain management” on 4/28/05. In addition, the records include entries noting “prolonged recumbancy” (lying down) leading to pressure sores, and prolonged use of non-steroidal anti-inflammatory drugs (NSAIDs).**

Clara's foot infections are treated with antibiotics, foot soaks and trimming the necrotic tissue from her foot. Her foot pain and arthritis have been treated with banamine and phenylbutazone, two Non-steroidal Anti-inflammatory Drugs (NSAIDs).

## Rani

## Donna

This 34-year-old elephant has suffered from a sole abscess and cracked nail in her left foot. The records indicate that the sole abscess on her left foot lasted for at least a year (2001-2002). By February 2004, the abscess was back, with keepers reporting that the “site heals and then breaks open again.” In 2005, the left foot was still infected and being treated with foot soaks and debriding (cutting away the dead tissue.)

Donna has also suffered from repeated nail cracks, with medical records noting in January 2005 that “This animal always had challenges with its nails.”

The records indicate that the SLZ has an indication of the source of Donna’s foot problems. In July 2000, veterinarians decided that no treatment was necessary for the dermocyctosis of Donna’s front feet “as animal is now spending more time outside, where the feet are dry and in more sunshine.”

In January 2002, Donna was diagnosed as overweight. Her other health problems include infertility and endometrial cysts, chronic problems with both tusks (cracks, breaks and infections) and **nuclear sclerosis in both eyes.**

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## Pearl

Pearl is a 35-year-old elephant who has suffered from foot problems for years. She has a prolapsed uterus, presumably stemming from the birth of Raji. The condition has caused urinary incontinence and her back feet have been affected from constantly standing in urine. Both back feet have soft soles and superficial ulcers. This condition is recorded consistently in the records since March 2001. The backs of her legs have had urine burns from this condition as well.

Pearl’s front feet also have problems. There are nail cracks and superficial erosions over 60 percent of the surface of the soles, according to a 2002 note. A January 2003 entry notes a “cuticle abscess that erupted this month.”

Pearl was been given phenylbutazone for front left quarter lameness in August – September

Given this information, USDA should inspect the St, Louis Zoo elephants' feet, medical records, and living conditions and require this zoo to either significantly improve the conditions under which it confines elephants, or relocate the elephants to a sanctuary where their needs can be met.



## IN DEFENSE OF ANIMALS

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14 March 2006

The Honorable Mike Johanns  
Secretary of Agriculture  
U.S. Department of Agriculture  
1400 Independence Ave., S.W.  
Room 200A  
Whitten Building  
Washington, DC 20250

Dr. Chester Gipson  
Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
4700 River Rd, Unit 84  
Riverdale, MD 20737-1234

***RE: Addendum to In Defense of Animals Citizen Petition (Feb. 2, 2006) Before the USDA Seeking An Interpretive Rule and Enforcement Under the Animal Welfare Act to Eliminate Violations of the Space and Conditions Regulations for Elephants at Zoos***

Dear Secretary Johanns and Dr. Gipson:

Thank you for your decision to publish in the federal register In Defense of Animals February 2, 2006 citizens petition to the USDA seeking an interpretive rule and enforcement under the Animal Welfare Act to eliminate violations of the space and conditions regulations for elephants in zoos.

This enclosed report on the St. Louis Zoo is submitted as an addendum to that petition. We request that it be published along with the full text of the petition in the Federal Register.

A review of elephant medical records (obtained through the Missouri Sunshine Law) reveals that elephants at the St. Louis Zoo are suffering from foot and joint disease due to inadequate space and living conditions. As a result, believes that St. Louis Zoo is violating the Animal Welfare Act requirement that states:

Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make normal postural and social adjustments with adequate freedom of movement. Inadequate space may be indicated by evidence of malnutrition, poor condition, debility, stress, or abnormal behavior patterns. (9 C.F.R. § 3.128)

IDA requests that USDA immediately inspect the St. Louis Zoo and enforce the adequate space and conditions regulations, by citing the zoo for violations of the Animal Welfare Act and compelling the zoo either to drastically improve space and conditions for the elephants held there or move the elephants to a sanctuary with the space and environment suitable to the vast spatial and social needs of this species.

Thank you for your consideration.

Sincerely,

b6

A large, solid black rectangular redaction box covers the signature area of the letter.



IN DEFENSE OF ANIMALS

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**ADDENDUM TO**

**FEB. 2, 2006 CITIZEN PETITION BEFORE THE UNITED STATES  
DEPARTMENT OF AGRICULTURE**

**SEEKING AN INTERPRETIVE RULE AND ENFORCEMENT UNDER  
THE ANIMAL WELFARE ACT TO ELIMINATE VIOLATIONS OF THE  
SPACE AND CONDITIONS REGULATIONS FOR ELEPHANTS AT ZOOS**

Submitted by:

**IN DEFENSE OF ANIMALS ("IDA")**

131 Camino Alto, Suite E,  
Mill Valley, California 94941

To:

**MIKE JOHANNNS**

Secretary of Agriculture  
U.S. Department of Agriculture  
Room 200A Whitten Building  
1400 Independence Ave., S.W.  
Washington, DC 20250

**DR. CHESTER GIPSON**

Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
4700 River Rd  
Unit 84  
Riverdale, MD 20737-1234

On

March 14, 2006

Revised

June 1, 2006

## **General Overview**

The St. Louis Zoo ("SLZ") houses **six female** Asian Elephants; Clara, Sri, Ellie, Rani, Donna, and Pearl, and one male Asian Elephant; Raja. In addition, a seventh female, Carolyn, died at the facility in April 2000. Foot and/or joint problems have been reported in the medical records for **6 of the 7** elephants. Joint and foot problems are also noted in the necropsy of the 8<sup>th</sup> elephant, Carolyn.

## **Exhibit and Holding Space-**

The zoo's Elephant Management Facility is a 13,000 square-foot holding area with 6,720 square feet of indoor space divided into 8 stalls and corridors for shifting. The barn is kept at 55-60 degrees Fahrenheit year round through gas circulating heat. All floors are concrete and unheated.

The zoo's outdoor exhibit area totals 53,860 square feet. One of the exhibits is smaller and is only used to house cows or calves and the other two are capable of housing bulls. The largest exhibit is just a .5 acre (23,250 square feet) yard.

## **Elephant Health Problems -**

All but one of the elephants currently alive at the St. Louis Zoo has experienced foot problems, lameness and/or joint disease. An eighth elephant who died at the zoo in 2000 also suffered from foot irregularities and arthritis.

The medical records demonstrate that SLZ personnel continue to treat the symptoms of

these problems by administration of antibiotics and painkillers, foot soaks and cutting necrotic (dead/rotting) tissue from the feet, without ever addressing the cause of the problem – the lack of space, exercise, confinement indoors during the winters and the concrete-floored barn.

Records indicate that SLZ personnel are aware that confinement indoors (where the floors are concrete) is the cause of some of these problems. For example, the “deeply worn” and sensitive nails of the young elephant Rani are attributed to “increased wear due to animals only recently being allowed out after being indoors all winter. (This animal is very active.)”

Skin problems on the feet of Pearl and Donna are thought to need no treatment because “animal is now spending more time outside, where the feet are dry and in more sunshine.”

Below is a brief summary of the health problems of elephants. More detailed excerpts from medical records are included in Appendix 1. Finally, copies of relevant pages from the medical records are attached as Appendices 2-9. Full copies of the medical records are included on the enclosed CD, along with an electronic version of this addendum and its appendices.

## **Details of Elephants and their Health Problems**

### **Carolyn**

Carolyn was found dead in her stall on April 11, 2000. She was 32-years-old. The necropsy found “severe polynephritis” and the cause of death was kidney failure. This condition was likely caused initially by a chronic urinary tract infection.

The necropsy identified cracks and defects on 3 of 4 of Carolyn’s feet and osteo-skeletal erosions on 3 of 4 limbs (arthritis). The left stifle (knee) showed severe DJD, erosion of half of the kneecap, femur and tibia. The left coxofemoral joint (hip) had severe Degenerative Joint Disease. The erosive lesions on the stifle and coxofemoral joint of the left rear leg are particularly disturbing, in that they indicate a chronic painful degenerative condition.

This elephant also suffered from uterine cysts and had tuberculosis bacterium present in a lymph node. She had been exposed to TB from an exhibit mate who died in 1979. Veterinarian performing necropsy believed that TB was "walled off" in granulomas and that Carolyn did not have "patent tuberculosis."

## Clara

Clara, 52-years old, has experienced numerous foot and limb problems, including recurring abscesses of both back feet for at least five years (the records only begin in January 2000).

Clara's left foot appears to have been abscessed for five years. Her right foot abscess appears to have lasted for three years, but then reoccurs a year later. Her left foot ends up with a serious defect – a 1.5 x 5 cm fissure near her middle toe.

Clara has also suffered from decubital sores (bedsores) on the left side of her face, her left elbow and left hip as a result of “prolonged recumbency” (laying down a lot) presumably due to foot pain.

Clara wears sandals on both back feet due to the chronic abscesses. Prior to the sandals, a boot was placed on Clara's abscessed left foot. A note in the records from April 2000 indicates that when a boot was first placed on this foot, Clara removed it and “rubbed sole on chain until moderate hemorrhage.” Chaining of course would only worsen Clara's problem and the fact that she rubbed her foot to the point of hemorrhage is an indication of the degree of discomfort she has experienced.

**Notes indicate that Clara has arthritis as well. Her left leg has had a problem with swelling. Signs that Clara is in pain include direct mention of pain in the medical records: “arthritis pain” on 8/1/01, and “pain management” on 4/28/05. In addition, the records include entries noting “prolonged recumbancy” (lying down) leading to pressure sores, and prolonged use of non-steroidal anti-inflammatory drugs (NSAIDs).**

Clara's foot infections are treated with antibiotics, foot soaks and trimming the necrotic

tissue from her foot. Her foot pain and arthritis have been treated with banamine and phenylbutazone, two Non-steroidal Anti-inflammatory Drugs (NSAIDs).

### **Rani**

This elephant is just 9-years-old. She has been suffering from intermittent lameness in her hind legs since August 2001, shortly after her 5<sup>th</sup> birthday.

On July 4, 2004, her lameness was described in records: "She is very hesitant to bend at the knee and the left rear limb is worse than the right. She is still moving around the stall and eating well, but she shuffles along and even occasionally circumducts her rear limbs to not have to bend." Her lameness is treated periodically with the NSAID phenylbutazone.

She has also suffered nail cracks and abnormal nail wear. Considered a "very active elephant," this young animal has been locked indoors for the winter, a factor which the zoo acknowledged contributed to her nail problems.

Rani's other problems include recurring belparospasm (muscle contraction of her eyelids - indicative of eye pain and/or something lodged in the eye) of her right eye, which has forced her to hold her right eye closed; anemia; a bite wound on her tail; and tusk problems (missing right tusk, broken left tusk). In June 2005, a rectal ultrasound indicated that Rani was not pregnant, however news reports from November 2005 indicate that this young elephant is pregnant. (See Appendix 9) This is an early age for an Asian elephant pregnancy, as the average age of first pregnancy in the wild is 13 years old.

### **Ellie**

Age 35, Ellie had a calf in approximately 1997. She is currently pregnant, after having

been diagnosed in 2004 as a questionable breeder with a confirmed ovarian cyst.

Ellie has experienced foot problems. In 2002, three of four feet show superficial circular depressions or deficits. Her right front foot had a cracked nail with a deep separation from the nail bed. This was treated by cutting flesh away from margins of the separation. Her left foot had cracks in 2 nails.

News reports from November 2005 indicate that Ellie is pregnant. (See Appendix 9)

### **Donna**

This 34-year-old elephant has suffered from a sole abscess and cracked nail in her left foot. The records indicate that the sole abscess on her left foot lasted for at least a year (2001-2002). By February 2004, the abscess was back, with keepers reporting that the “site heals and then breaks open again.” In 2005, the left foot was still infected and being treated with foot soaks and debriding (cutting away the dead tissue.)

Donna has also suffered from repeated nail cracks, with medical records noting in January 2005 that “This animal always had challenges with its nails.”

The records indicate that the SLZ has an indication of the source of Donna’s foot problems. In July 2000, veterinarians decided that no treatment was necessary for the dermatocytosis of Donna’s front feet “as animal is now spending more time outside, where the feet are dry and in more sunshine.”

In January 2002, Donna was diagnosed as overweight. Her other health problems include infertility and endometrial cysts, chronic problems with both tusks (cracks, breaks and infections) and **nuclear sclerosis in both eyes.**

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### **Pearl**

Pearl is a 35-year-old elephant who has suffered from foot problems for years. She has a prolapsed uterus, presumably stemming from the birth of Raji. The condition has caused urinary incontinence and her back feet have been affected from constantly standing in urine. Both back feet have soft soles and superficial ulcers. This condition is recorded consistently in the records since March 2001. The backs of her legs have had urine burns from this condition as well.

Pearl's front feet also have problems. There are nail cracks and superficial erosions over 60 percent of the surface of the soles, according to a 2002 note. A January 2003 entry notes a "cuticle abscess that erupted this month."

Pearl was given phenylbutazone for front left quarter lameness in August – September 2002. This lameness recurs, according to the records, in January 2004.

Pearl's other health problems include repeated urinary tract infections, a perineal hernia, endometrial cysts, tusk and tooth fracture and infection.

### Raja

This 13-year-old son of Pearl is suffering from the beginning stages of foot disease. Between 2001 and 2005, medical records note nail cracks on 3 of 4 feet. He has also been noted to have pitted soles in front feet and dry, cracked heels in rear feet. Raja also has had chronic fractured tusks with infected pulp cavity on one occasion.

### Sri

Sri, 26, is the only elephant at the SLZ who has not experienced foot or joint problems. In November 2005, a pregnant Sri lost her baby during labor. To date, she still carries the dead fetus in her body. Failed pregnancies are another captivity-related problem, with **11 elephant**

**pregnancies** since 2001 ending in stillbirth, death of fetus in utero, or death of baby within 1 day of birth.

## **Conclusion**

Elephants at the St. Louis Zoo are being held in inadequate conditions that are not consistent with their health and well-being. In addition to the foot and joint disease discussed in detail above and in the attached excerpts, the elephants suffer from other common “zoo-genic” conditions such as reproductive abnormalities and tusk injuries.

The St. Louis Zoo is aware at minimum that prolonged confinement of elephants during winter months causes problems with elephants’ feet, yet it has done nothing to address the cause of the elephants’ foot and joint problems: inadequate space and substrates.

Given this information, USDA should inspect the St, Louis Zoo elephants’ feet, medical records, and living conditions and require this zoo to either significantly improve the conditions under which it confines elephants, or relocate the elephants to a sanctuary where their needs can be met.

Excerpts Regarding Foot Problems and Lameness from Medical Records

**Carolyn**

**Accession number 0680664**

Est. DOB Feb. 11 1968 / Death April 11, 2000 32Y, 2M at death

Dam/Sire unknown/wild

"28 February 00 "Marked" lameness noted on right rear limb  
Reluctant to move knee

11 April 2000 found dead in stall. Necropsy revealed "severe polynephritis" likely caused by chronic urinary tract infection. Cause of death was kidney failure.

Necropsy:

Right forefoot: Two defects/cracks at lateral toe.

Bilateral rear: Left [foot] has large defect parallel to surface at medial toe and a lesser crack in digit 3, Right foot has cracks cranially at digit 3 and laterally at digit 4.

Skeletal system: Left fore: Scapulohumeral joint: Mild cartilage erosion noted at the articular surfaces. Moderate articular erosion present at the medial and lateral portions of the elbow. Right forelimb joints appear within normal limits. Left coxofemoral joint: the femoral head has multiple irregular erosive to pitted lesions of the cartilage with osteophyte formation at the acetabulum. Left stifle: the lateral femoral condyle is approximately half the size of the right . . . the cartilage is irregularly eroded at the patellar groove. Cartilage has been lost from the distal half of the articular surface of the patella. The articular surface at the proximal tibia is eroded and pitted with osteophyte deposition. Right coxo-femoral joint changes are milder with respect to erosions and osteophyte formation, and the stifle has no erosions.

**Clara**

**Accession Number 055667**

**Regional Studbook #235**

Wild caught 1953 est date of birth 1953

Dam and Sire unknown/wild

purchased 1955 from Goebel L

18 February 2000 "sole abscess seems to have ruptured. Examination of sole reveals a soft tender spot approx 8 cm medial to lesion between toes. Also an open tract is present from this spot to lateral foot wall.

20 March 2000 "no change in lameness. Occasionally seen to lie down during the day (not usually done) . . . duration and progression of lesion raises concerns about potential osteomyelitis. Keepers inquired about possible analgesics.

23 March 2000 "specimen reluctant to lift left foot."

19 April 2000 Clara is immobilized in elephant chute and sedated. Veterinarians note "marked undermining of sole", cut away necrotic tissue. Appears that boot is placed on Clara at this time.

20 April 2000 note indicates that Clara removed the boot and "rubbed sole on chain until moderate hemorrhage"

2 May 2000 Clara is sedated to examine large swelling on left hip. Records note decubital sores on left side of face, left elbow and left hip "due to prolonged recumbency." Entry also states "lance abscess."

3 May 2000 Clara placed on banamine for 3 days.

July 20 notes that abscess is getting smaller and continue debriding. But new abscess found on right foot.

16 March 2001 notes a left rear – solar abscess. Wearing sandal daily.

18 June 2001 again notes left rear lesion.

1 Aug 2001 keepers report arthritis pain seems to be more prominent and consistent

16 Dec. 2001 note right rear limb crack. "sole of right hind foot is soft and can be undermined where lateral nail crack starts"

8 Jan 02

4 February 2002 "Left rear foot has deteriorated. Sole between the previous defect is undermined all the way to the third nail and keepers report tract to the cuticle of this nail as well. Recommend removing entire undermined sole and advised that nail may slough." Right foot reported as improved but still debriding and wearing sandals on both feet.

28 November 2003 Right rear foot pad "completely healed" but left foot has "significant deficit" and "fluid pocket".

18 March 2004 Right foot shows evidence of abscessation. Foot defect subsequently noted.

2 April 2004 Left rear foot continues to have subsolar abscess.

10 July 2004 ultrasound exam shows "small amount of fluid appreciated under damaged surface of both feet. Right foot has 3 X 3 cm soft area near center of the foot. Left foot 1.5 X 5 cm fissure near middle toe. Keepers continue to trim feet, flush and soak. Animal is wearing sandals on both rear feet."

April 28, 2005 Placed on phenylbutazone (an NSAID) for "pain management" "until further notice."

**Rani**

**Accession Number 101145**

Captive born, July 5<sup>th</sup>, 1996

Dam 876015 at Jacksonville Zoo and Gardens

Sire M85030 at Rosamund Gifford Zoo at Barnet

Loan from Jacksonville (896059)

27 August 2001 Intermittent lameness on left hind leg noted

6 September 2001 Crack in nail 6 cm on cranial aspect of mid nail of left hind foot

16 January 2002 Right rear leg nail crack extending to ¾ of nail on digit 5. "recommend paring to prevent further spreading. All feet show superficial circular defects, soft pads."

13 Feb. 2002 Lameness in rear limbs. Put on phenylbutazone for 3 days.

Aug 2001- Feb 2002 – There are 26 entries which state "Problem: Lameness LEG (left hind) (suspected)"

8 January 2003 "keepers report intermittent chronic left rear leg lameness" noted.

26 March 2004 – Lameness not noted but "ventral aspect of medial nails on hind feet is deeply worn, somewhat sensitive. Discussed with ZM possibility of abnormal conformation, increased wear due to animals only recently being allowed out after being indoors all winter. (This animal is very active.), trauma on some object in exhibit or holding."

4 July 2004 Stiff gait to rear limbs for last 48 hours. She is very hesitant to bend at the knee and the left rear limb is worse than the right. She is still moving around the stall and eating well, but she shuffles along and even occasionally circumducts her rear limbs to not have to bend. 3 days of phenylbutazone.

22 August 2004 Moving slowly. "stiff rear limbs" 3 more days of phenylbutazone.

**Ellie**

**Accession Number 101144**

**Regional Studbook # 362?**

Wild Born, Est. DOB 1971

Est. Age 34 Y, 5M, 17D, +/- 29 Years

Dam/Sire unknown/wild

On loan from Jacksonville Zoo (876515)

December 2001 Hemorrhoids noted.

16 January 2002 Annual exam: Animal ambulates with "stiff" front Right limb which the staff "considers normal" for this animal. Three of four feet show superficial circular depressions or deficits. Right front limb has lateral long crack in digit #1 with a moderate separation of nail bed on this leg. This separation is deep and material embedded within the .5 cm deficit. Recommend paring (trimming) margins of this deficit.

Right ear tear, lesion also noted. Hemorrhoids reduced in size. Healing ulcerated tissue near tail noted.

12 April 2002 Rectal Ultrasonography by Dr. Dennis Schmitt. Found to have healthy uterus but a cyst on one ovary.

Oct. 2002 Restrained for reproductive exam. Left ovary deemed normal, right ovary not examined. (fluid filled loop of intestine blocking view).

8 Jan 2003 Annual Exam. Dry cuticles, area over medial left rear hoof wall to be explored and small area on left elbow draining some purulent materials.

11 Feb. 2004 Annual Exam: Left foot also has cracks in nails 3 and 5 with some extensions into the cuticle noted. Suggest if crack grows out a bit that keepers try to incise horizontal line across the top to try to keep it from extending back to the cuticle. Other three feet look normal.

13 May 2004 Reproductive exam. "Dr. Dennis Schmitt feels Ellie may have a cyst on her left ovary which may be contributing to her abnormal endocrine profile." Give GnRH Im for 3 weeks and monitor progesterone.

27 July 2004 Another reproductive exam. Again left ovarian cyst suspected. GnRH given to stimulate a normal cycle of breeding if it is not an ovarian cyst and if it is should cause luteinization of the cyst.

9-11 Sept 2004 Ellie put with Raja and bred.

28 December 2004 Diagnosis of pregnancy supported by ultrasound and elevated progesterone level.

January 2005 Annual Exam. Feet deemed healthy

2 Feb. 2005 "Tail wound from bite."

**Donna**

**Accession Number 071665**

Regional Studbook # 235

Estimated birth date May '71, Est. Age 34 Y, 2 M

Sire and Dam unknown/wild  
Purchased from Goebel L

Dermocytosis of front feet noted July '00. "No treatment at this time as animal is now spending more time outside, where the feet are dry and in more sunshine."

2 March 01 Right tusk broke off 1 inch below gumline. Purulent discharge present. "Sole abscess" plus crack that has been "managed for several months" in nail 3 of left front.

16 March 01 Annual exam. Left tusk crack. Right tusk broken below gingival surface, mild superficial infection present, being managed appropriately with flushing. Feet – Right Front: thickened cuticles extending to sole. Left front: cuticles overgrown, sole smooth but has soft spot adjacent to third nail, third nail split distally. Right and Left rear: Pad healthy, cuticles overgrown, some superficial cracks in pad.

4 April 01 Soft spot/lesion (previously referred to as abscess) continues on left front foot adjacent to nail 3. Note indicates keeper trimming overlying horn.

6 April 01 Ultrasound of "solar abscess" on left front foot done. "Keepers to continue debriding this area."

9 January 02 Animal is diagnosed as overweight. Left front foot abscess still present. All four feet show circular erosions. Feet of right and left forelimbs have significant cracks in nails. Subsequent entries do not mention abscess.

12 April 2002 Reproductive exam. "Rectal ultrasonography by Dr. Dennis Schmitt revealed multiple endometrial cysts, rendering this cow non-reproductive."

7 January 2003 physical exam reveals superficial erosions on all feet, but feet deemed "healthy." Left front foot has crack that keepers continue to trim. Both tusks have been broken but have now grown beyond the gingival rim. Distal tail missing (chronic injury).

10 February 04 Deep soft spot on left front foot. "Keeper reports that site heals and then breaks open again."

27 January 2005 Left front foot soaked regularly due to soft spot on sole below 3<sup>rd</sup> nail. 3<sup>rd</sup> nail also has crack. RF has cracks on nails 3 and 4. Foot is soaked twice weekly. Left rear has cracks on nails 2, 3, 4 but "all are in good condition." "This animal always had challenges with its nails," but notes nails look healthy and elephant team is doing well in managing the cracks in the nails.

**Pearl**

**Accession Number 073666**  
Regional Studbook # 234  
Est. DOB 1971  
Dam and Sire unknown/wild

Acquired from Southwick Nov '73  
Loaned to Dickerson Mar '90  
Returned to St Louis Sept '91

1 December 2000 Nail crack in 3<sup>rd</sup> toe of left front

7 March 2001 Front left foot, Rear feet have soft pads due to chronic wetness from urinary incontinence (result of prolapsed uterus). This also causes burning of skin on back of legs.

10 January 2002 physical exam. Nails ok on right front foot but sole has multiple superficial erosions covering 60 percent of surface. Left front foot Toe 5 "full thickness top to bottom crack that has been present for approx 1 year. Keepers continue corrective trimming. Sole also has multiple superficial erosions. Rear feet: nails soft (suspect from urine wetting), soles have superficial ulcers covering approximately 40 percent of sole. Skin and margins of soles erythematous and soft with some superficial sloughing due to urine scald.

8 August 2002 – 5 September 2002 Front left quarter lameness recorded. Elephant put on phenylbutazone.

26 Sept. 2002 – Transrectal and transdermal ultrasonic evaluation of perineal hernia confirms herniated uterine horn ventral to tail and pooling urine ventrally. Pooled fluid (urine) has flocculent appearance. Several endometrial cysts are present throughout uterine mucosa, several uterine masses are present (polyp or neoplasms.)

10 January 2003 Physical exam notes hoof crack on lateral digit of left front foot and also a cuticle abscess that erupted "earlier this week" but is "quiescent now". Both rear feet have soft soles and hooves due to chronic urine dribbling from incontinence– soft almost gelatinous tissue noted in interdigital space, does not go deeply when trimmed with a hoof knife.

30 December 2003 "This elephant has been subjected to some aggression from the male, so elevation [of white blood cell count] may be stress-related."

12 Feb. 2004 Routine Physical. All feet look okay, only minor cracks in toes, no splits in soles.

26 Jan 2005 Uterine prolapse still present, not thought to "compromise her healthy (sic)." No evidence of urine scald on this exam. Foot exam – both front feet have small (1-2 cm), superficial (5 mm deep) irregularities on the sole surface, however these are shallow and insignificant. Both back feet are in excellent condition.

11 Feb. 2005 "Left foot – a 2-5 cm fluid pocket is present 3 cm deep from the pad under the area of a superficial sole deficit. The elephant is not lame on this leg and it is suspected that the pocket is a seroma. No underlying lesions noted on right foot.

*Note:* A seroma, is an accumulation of serum that has accumulated in a dead space in the tissue. It is the result of tissue insult and the product of tissue inflammation and the body's defense mechanisms.

**Raja**

**Accession number 921222**

Regional Studbook # 339

Captive born at St Louis Zoo

DOB Dec. 27, 1992, Age 12Y, 7M

Dam 073666 Pearl

Sire 815 at Dickerson Park Zoo

11 Jan 2000 "Left tusk canal remains open [3 inches]." Keepers flushing daily, cleaning with cotton swab. Canal believed to be closed and no infection present.

14 March 2001 Annual Exam. Nail cracks noted on 3 of 4 feet. Tail tip is roughened (had been bitten as calf), right tusk has fractured end, left tusk has exposed pulp canal.

18 June 2001 Skin loss on trunk. Trauma is suspected cause.

15 January 2002 Annual Exam: Nail cracks in 3 of 4 feet. Pitted soles in front feet. Dry cracked heels in rear feet. Right tusk fractured at end, left tusk pulp canal exposure continues.

15 January 2003 Annual Exam: Superficial nail cracks noted on front feet. Feet described as healthy. Right tusk is shorter and cracked.

14 February 2004. Annual Exam: Superficial nail cracks on front feet "being monitored/stopped by keepers." Left tusk has 4 inch longitudinal crack

29 January 2005 Minor cracks on front feet again noted.

**Sri**

**Accession Number 101833**

**Regional Studbook # 247**

Captive Born? Est DOB Jan. 1980

Est. Age 26

Dam/Sire unknown/wild

On loan from Seattle (21262)

No problems with feet noted here.

Wound on end of tail due to bite by male Feb. '04

Lesion on roof of mouth possible trauma Jan '04

Suspect Monocytosis and Iron Transport Disease or liver problems but not confirmed.

Annual Exam January 05 no abnormal findings, "all feet in excellent condition"

Suspected pregnancy Jan. '05 , later confirmed  
Baby died in utero November 2005. As of Jan 2006, fetus has not been expelled.

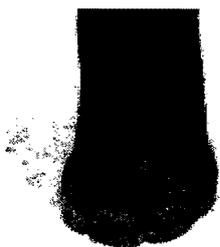
## FEET OF CLARA AT ST. LOUIS ZOO:



Photos taken November 2005.

From video documentation, it appears that Clara cannot bear weight on either foot for more than a few minutes. She is observed to constantly shift weight back and forth from one foot to another.

## NORMAL ELEPHANT FOOT



## SRI BEFORE PREGNANCY

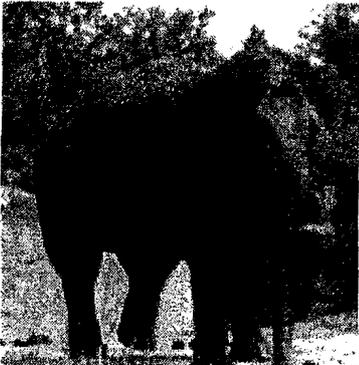


Photo source: St. Louis Zoo Website

## SRI'S CELL WHERE SHE WAS REPORTEDLY CONFINED BEFORE AND AFTER HER BABY DIED IN UTERO

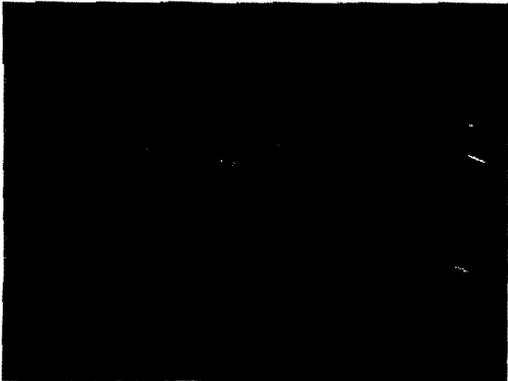
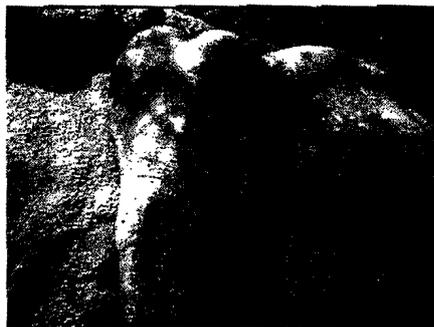


Photo taken of Sri from St. Louis Zoo Closed-circuit television, November 2005, a week after she lost her calf in utero.

## SRI AFTER CARRYING DEAD FETUS FOR 4 MONTHS



Photos taken March 16, 2006

*Sri appears to be losing weight. Skull and backbone are prominent.*

**ADDENDUM TO**

**FEB. 2, 2006 CITIZEN PETITION BEFORE THE UNITED STATES  
DEPARTMENT OF AGRICULTURE**

**SEEKING AN INTERPRETIVE RULE AND ENFORCEMENT  
UNDER THE ANIMAL WELFARE ACT TO ELIMINATE  
VIOLATIONS OF THE SPACE AND CONDITIONS REGULATIONS  
FOR ELEPHANTS AT ZOOS**

Submitted by:

**IN DEFENSE OF ANIMALS ("IDA")**

131 Camino Alto, Suite E,  
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To:

**MIKE JOHANNIS**

Secretary of Agriculture  
U.S. Department of Agriculture  
Room 200A Whitten Building  
1400 Independence Ave., S.W.  
Washington, DC 20250

**DR. CHESTER GIPSON**

Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
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Riverdale, MD 20737-1234

On

March 14, 2006

## **General Overview**

The St. Louis Zoo ("SLZ") houses five females Asian Elephants; Clara, Sri, Ellie, Rani, Donna, and Pearl, and one male Asian Elephant; Raja. In addition, a sixth female, Carolyn, died at the facility in April 2000. Foot and/or joint problems have been reported in the medical records of 5 of the 6 elephants. Joint and foot problems are also noted in the necropsy of the 7<sup>th</sup> elephant, Carolyn.

### **Exhibit and Holding Space-**

The zoo's Elephant Management Facility is a 13,000 square-foot holding area with 6,720 square feet of indoor space divided into 8 stalls and corridors for shifting. The barn is kept at 55-60 degrees Fahrenheit year round through gas circulating heat. All floors are concrete and unheated.

The zoo's outdoor exhibit area totals 53,860 square feet. One of the exhibits is smaller and is only used to house cows or calves and the other two are capable of housing bulls. The largest exhibit is just a .5 acre (23,250 square feet) yard.

### **Elephant Health Problems -**

All but one of the elephants currently alive at the St. Louis Zoo has experienced foot problems, lameness and/or joint disease. A seventh elephant who died at the zoo in 2000 also suffered from foot irregularities and arthritis.

The medical records demonstrate that SLZ personnel continue to treat the symptoms of these problems by administration of antibiotics and painkillers, foot soaks

and cutting necrotic (dead/rotting) tissue from the feet, without ever addressing the cause of the problem – the lack of space, exercise, confinement indoors during the winters and the concrete-floored barn.

Records indicate that SLZ personnel are aware that confinement indoors (where the floors are concrete) is the cause of some of these problems. For example, the “deeply worn” and sensitive nails of the young elephant Rani are attributed to “increased wear due to animals only recently being allowed out after being indoors all winter. (This animal is very active.)”

Skin problems on the feet of Pearl and Donna are thought to need no treatment because “animal is now spending more time outside, where the feet are dry and in more sunshine.”

Below is a brief summary of the health problems of elephants. More detailed excerpts from medical records are included in Appendix 1. Finally, copies of relevant pages from the medical records are attached as Appendices 2-9. Full copies of the medical records are included on the enclosed CD, along with an electronic version of this addendum and its appendices.

## **Details of Elephants and their Health Problems**

### **Carolyn**

Carolyn was found dead in her stall on April 11, 2000. She was 32-years-old. The necropsy found “severe polynephritis” and the cause of death was kidney failure. This condition was likely caused initially by a chronic urinary tract infection.

The necropsy identified cracks and defects on 3 of 4 of Carolyn's feet and osteo-skeletal erosions on 3 of 4 limbs (arthritis). The left stifle (knee) showed severe DJD, erosion of half of the kneecap, femur and tibia. The left coxofemoral joint (hip) had severe Degenerative Joint Disease. The erosive lesions on the stifle and coxofemoral joint of the left rear leg are particularly disturbing, in that they indicate a chronic painful degenerative condition.

This elephant also suffered from uterine cysts and had tuberculosis bacterium present in a lymph node. She had been exposed to TB from an exhibit mate who died in 1979. Veterinarian performing necropsy believed that TB was "walled off" in granulomas and that Carolyn did not have "patent tuberculosis."

### Clara

Now 52-years-old, Clara has experienced numerous foot and limb problems, including recurring abscesses of both back feet for at least five years (the records only begin in January 2000).

Clara's left foot appears to have been abscessed for five years. Her right foot abscess appears to have lasted for three years, but then reoccurs a year later. Her left foot ends up with a serious defect – a 1.5 x 5 cm fissure near her middle toe.

Clara has also suffered from decubital sores (bedsores) on the left side of her face, her left elbow and left hip as a result of "prolonged recumbency" (laying down a lot) presumably due to foot pain.

Clara wears sandals on both back feet due to the chronic abscesses. Prior to the sandals, a boot was placed on Clara's abscessed left foot. A note in the records from April 2000 indicates that when a boot was first placed on this foot, Clara removed it and

“rubbed sole on chain until moderate hemorrhage.” Chaining of course would only worsen Clara’s problem and the fact that she rubbed her foot to the point of hemorrhage is an indication of the degree of discomfort she has experienced.

Notes indicate that Clara has arthritis as well. Her left leg has had a problem with swelling. Blood work shows signs of neutrophilia (indicative of acute bacterial infection) and non-regenerative anemia. Her other ailments include signs of behavioral and nutritional problems, possibly a result of pain, and subdermal lesions on the uterus.

Clara’s foot infections are treated with antibiotics, foot soaks and trimming the necrotic tissue from her foot. Her foot pain and arthritis have been treated with banamine and phenylbutazone, two Non-steroidal Anti-inflammatory Drugs (NSAIDs).

### **Rani**

This elephant is just 9-years-old. She has been suffering from intermittent lameness in her hind legs since August 2001, shortly after her 5<sup>th</sup> birthday.

On July 4, 2004, her lameness was described in records: “She is very hesitant to bend at the knee and the left rear limb is worse than the right. She is still moving around the stall and eating well, but she shuffles along and even occasionally circumducts her rear limbs to not have to bend.” Her lameness is treated periodically with the NSAID phenylbutazone.

She has also suffered nail cracks and abnormal nail wear. Considered a “very active elephant,” this young animal has been locked indoors for the winter, a factor which the zoo acknowledged contributed to her nail problems.

Rani’s other problems include recurring belparospasm (muscle contraction of

her eyelids - indicative of eye pain and/or something lodged in the eye) of her right eye, which has forced her to hold her right eye closed; anemia; a bite wound on her tail; and tusk problems (missing right tusk, broken left tusk). In June 2005, a rectal ultrasound indicated that Rani was not pregnant, however news reports from November 2005 indicate that this young elephant is pregnant. (See Appendix 9) This is an early age for an Asian elephant pregnancy, as the average age of first pregnancy in the wild is 13 years old.

### **Ellie**

Age 35, Ellie had a calf in approximately 1997. She is currently pregnant, after having been diagnosed in 2004 as a questionable breeder with a confirmed ovarian cyst.

Ellie has experienced foot problems. In 2002, three of four feet show superficial circular depressions or deficits. Her right front foot had a cracked nail with a deep separation from the nail bed. This was treated by cutting flesh away from margins of the separation. Her left foot had cracks in 2 nails.

News reports from November 2005 indicate that Ellie is pregnant. (See Appendix 9)

### **Donna**

This 34-year-old elephant has suffered from a sole abscess and cracked nail in her left foot. The records indicate that the sole abscess on her left foot lasted for at least a year (2001-2002). By February 2004, the abscess was back, with keepers reporting that the "site heals and then breaks open again." In 2005, the left foot was still infected and

being treated with foot soaks and debriding (cutting away the dead tissue.)

Donna has also suffered from repeated nail cracks, with medical records noting in January 2005 that “This animal always had challenges with its nails.”

The records indicate that the SLZ has an indication of the source of Donna’s foot problems. In July 2000, veterinarians decided that no treatment was necessary for the dermoytosis of Donna’s front feet “as animal is now spending more time outside, where the feet are dry and in more sunshine.”

In January 2002, Donna was diagnosed as overweight. Her other health problems include infertility and endometrial cysts, chronic problems with both tusks (cracks, breaks and infections) and nuclear sclerosis (cataracts) in both eyes.

### **Pearl**

Pearl is a 35-year-old elephant who has suffered from foot problems for years. She has a prolapsed uterus, presumably stemming from the birth of Raji. The condition has caused urinary incontinence and her back feet have been affected from constantly standing in urine. Both back feet have soft soles and superficial ulcers. This condition is recorded consistently in the records since March 2001. The backs of her legs have had urine burns from this condition as well.

Pearl’s front feet also have problems. There are nail cracks and superficial erosions over 60 percent of the surface of the soles, according to a 2002 note. A January 2003 entry notes a “cuticle abscess that erupted this month.”

Pearl was been given phenylbutazone for front left quarter lameness in August – September 2002. This lameness recurs, according to the records, in January 2004.

Pearl's other health problems include repeated urinary tract infections, a perineal hernia, endometrial cysts, tusk and tooth fracture and infection.

### **Raja**

This 13-year-old son of Pearl is suffering from the beginning stages of foot disease. Between 2001 and 2005, medical records note nail cracks on 3 of 4 feet. He has also been noted to have pitted soles in front feet and dry, cracked heels in rear feet. Raja also has had chronic fractured tusks with infected pulp cavity on one occasion.

### **Sri**

Sri, 26, is the only elephant at the SLZ who has not experienced foot or joint problems. In November 2005, a pregnant Sri lost her baby during labor. To date, she still carries the dead fetus in her body. Failed pregnancies are another captivity-related problem, with 9 elephant pregnancies since 2001 ending in stillbirth, death of fetus in utero, or death of baby within 1 day of birth.

## **Conclusion**

Elephants at the St. Louis Zoo are being held in inadequate conditions that are not consistent with their health and well-being. In addition to the foot and joint disease discussed in detail above and in the attached excerpts, the elephants suffer from other common "zoo-genic" conditions such as reproductive abnormalities and tusk injuries.

The St. Louis Zoo is aware at minimum that prolonged confinement of elephants during winter months causes problems with elephants' feet, yet it has done nothing to

address the cause of the elephants' foot and joint problems: inadequate space and substrates.

Given this information, USDA should inspect the St, Louis Zoo elephants' feet, medical records, and living conditions and require this zoo to either significantly improve the conditions under which it confines elephants, or relocate the elephants to a sanctuary where their needs can be met.

# **Appendix 1**

## **Excerpts from Medical Records**

## **Appendix 2**

### **Carolyn Medical Records Relevant Pages**

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**ELEPHAS MAXIMUS (no subsp)**  
**INDIAN ELEPHANT (E,I)**  
Name: CAROLYN

Sex: Female                      Acc. #: 068664  
Age: 37Y SM Est.                Birth: 11.Feb.1968

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**Clinical Note:**

28.Feb.2000

Problem: lameness - right rear limb (Confirmed)  
Marked lameness on right rear limb. Elephant will not bend knee, but walks with a stiff - legged swinging gait, and is reluctant to move. No aggression positively noted by keepers, but some suspicion that there might be aggression occurring at night. Keepers report that sole of foot is healthy and that she will present it for hosing and cleaning. Animal may also have lost weight judged on body appearance. Keepers to collect blood for CBC and chemistry profile, and attempt weighing as well. Will consider analgesia if bloodwork is normal. (REJ)

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**Clinical Note:**

1.Mar.2000

Problem: lameness - right rear limb (Confirmed)  
Blood sample collected from ear vein - EDTA and serum - sent for CBC and superchem profile. (CD)

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**Clinical Note:**

2.Mar.2000

Problem: lameness - right rear limb (Confirmed)  
Results of blood collection reveal TP = 9.7 g/dl, globulin 7.2 g/dl, BUN = 47 mg/dl, creat = 3.5 mg/dl, Ph = 9.6 mg/dl, and Ca = 16.4 mg/dl. Keepers instructed to encourage fluid intake, repeat bloodwork next week. (REJ)

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Medical History Report - Summary for Individual Specimen  
ST. LOUIS ZOOLOGICAL PARK

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Ventral head length: 63cm  
Width of mouth, measured across base of trunk: 20cm  
Neck height: 105 (52) cm  
Neck length 23cm  
Width between ears: 82.5cm  
Anterior ear width 44.5cm  
Posterior ear width 64cm  
Dorsal ear length 56cm  
Ventral ear length 23.5cm  
Width between eyes: 44cm  
Shoulder height: 224cm  
Dorsum height: 250.5cm  
Dorsal body length: 209cm  
Middle length: 189cm  
Bottom length: 136cm  
Height at front of forelimb: 134cm  
Height at front of hindlimb: 223.5cm  
Height at back of hindlimb: 204cm  
Tail length: 128cm  
Tail width at base: 30cm  
Forelimb height: 162.5cm  
Width at top/ half of circumference: 115.5cm  
Feet: 5 toenails are present at each forelimb and 4 on each hindlimb.  
Left fore: mediolateral diameter 34.4cm, craniocaudal diameter 36.9cm  
Right fore: mediolateral diameter 36.9cm, craniocaudal diameter 36.2cm  
with two defects/cracks at the lateral toe.  
Bilateral rear: mediolateral 28.8cm, craniocaudal 40cm, left has a large defect parallel to the surface at the medial toe(I) and a lesser crack at digit III, while the right foot has cracks cranially at digit III and laterally at digit IV.  
Teeth: 4 plates are present with a total length of 15cm, a maximum width 5.6cm and maximum grinding length of 12.5cm.  
Abrasions approximately 2-3cm in diameter are present at the left face adjacent to the eye and temporal gland region.

Thoracic and abdominal cavities: Low to moderate amounts of subcutaneous and cavitory fat are present. Abundant fibroelastic connective tissue is present at the abdominal body wall and between parietal and visceral pleura (normal species finding).

Respiratory system: No communication between the nasal passages is noted on cross sectioning the trunk at 10-20cm intervals. The epiglottis is edematous and there are scattered white 2-3 mm firm nodules at the arytenoid cartilage, which has a gray mucosa. The trachea is unremarkable. The lungs are not collapsed and generally, especially dorsally, have a pumice stone consistency, suggestive of mineralization. The right lung, 47.56kg, particularly at the lateral and caudal margins has numerous firm yellow frequently mineralized granulomas. No granulomas are noted in the left lung and it has only

**Medical History Report - Summary for Individual Specimen  
ST. LOUIS ZOOLOGICAL PARK**

and a single 4mm diameter tan focus, granuloma, suspect. It weighs 6.342 kg and it is 184 x 20x 1.5cm cubed. The mediastinal lymph nodes are markedly enlarged (e.g., 8 x 4 x 3.5cm cubed) and firm with mineralized caseous pale yellow centers. The mesenteric lymph nodes are tan/green and unremarkable.

**Endocrine system:** The thyroid gland is heart-shaped with lobes conjoined. It is dark red/purple and the lobes are each 10 x 5 x 2cm cubed and weighs 306g. The left adrenal gland weighs 224g and it is 22 x 5 x 3.5cm cubed, while the right weighs 348g and is 24 x 5 x 2.5cm cubed. The medulla is 6mm thick and gray/pink while the cortex is faintly streaked yellow and tan and it is 8mm thick.

**Central nervous system:** Not examined.

**Sensory organs:** Within normal limits.

**Muscular system:** The muscle is dark red and distribution is within normal limits.

**Skeletal system:** Left fore: Scapulohumeral joint: Mild cartilage erosions are noted at the articular surfaces. Moderate articular erosion is present at the medial and lateral portions of the elbow. Right forelimb joints appear within normal limits.

Left coxofemoral joint: The femoral head has multiple irregular erosive to pitted lesions of the cartilage with osteophyte formation at the acetabulum. Left stifle: The lateral femoral condyle is approximately half the size of the right (bilateral normal finding?). The cartilage is irregularly eroded at the patellar groove. Cartilage has been lost from the distal half of the articular surface of the patella. The articular surface at the proximal tibia is eroded and pitted with osteophyte deposition. Right coxofemoral joint changes are milder with respect to erosions and osteophyte formation, and the stifle had no erosions.

**Gross Diagnoses >>>**

LUNG, MINERALIZATION, PRESUMPTIVE, BILATERAL  
LUNG, GRANULOMA, MULTIPLE, UNILATERAL (RIGHT)  
LYMPH NODE (MEDIASTINAL), GRANULOMA, MULTIPLE  
LIVER, CONGESTION  
HEART, CARDIOMEGALY, MILD  
KIDNEY, PYELONEPHRITIS, BILATERAL  
BLADDER, CYSTITIS, PURULENT  
URETER, ABNORMAL CONTENT, PURULENT, BILATERAL  
LIMB (NOS), ARTHRITIS, CHRONIC, UNILATERAL (LEFT)  
UTERUS, HYPERPLASIA, CYSTIC, PRESUMPTIVE

## **Appendix 3**

### **Clara Medical Records Relevant Pages**

Medical History Report - Summary for Individual Specimen  
ST. LOUIS ZOOLOGICAL PARK

=====

ELEPHAS MAXIMUS (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

=====

.....2000...

- 20.Mar Clinical note recorded. (REM)  
23.Mar Clinical note recorded. (CJD)
- 8.Apr Clinical note recorded. (CJD)  
9.Apr Purpose/Problem: crack - left rear foot (Confirmed)  
Rx: UNIPRIM 75gm PO SID for 7 days. (28.26 mg/kg)  
Clinical note recorded. (CJD)  
10.Apr Clinical note recorded. (REM)  
13.Apr Clinical note recorded. (REM)  
19.Apr Sedated: XYLAZINE/ATIPAMEZOLE  
Severe foot abscess, radiographs, blood.  
Blood sample: (EDTA) (13:10.0) Hematology/Chemistry/Serology results.  
WBC:12.80 \*10<sup>3</sup>/UL; HCT: 34.0%; BUN:9 MG/DL;  
Hemolysis  
Purpose/Problem: crack - left rear foot (Confirmed)  
Rx: KETOPROFEN 2000mg IM once  
AMPICILLIN TRIHYDRATE 25000mg IM once (8.94 mg/kg)  
UNIPRIM 75gm PO SID until further notice.  
Vaccination: COVEXIN 8 2ml IM once  
Clinical note recorded. (CJD)
- Weight: 2752 Kg ( 6065 Lb)
- 20.Apr Clinical note recorded. (CJD)  
21.Apr Clinical note recorded. (REJ)  
22.Apr Purpose/Problem: crack - left rear foot (Confirmed)  
Rx: AMPICILLIN TRIHYDRATE 22.38gm IM once (8.00 mg/kg)  
Clinical note recorded. (CJD)  
23.Apr Clinical note recorded. (REM)  
24.Apr Clinical note recorded. (REM)  
25.Apr Clinical note recorded. (REJ)  
26.Apr Clinical note recorded. (REJ)
- 1.May Clinical note recorded. (REM)  
2.May Sedated: XYLAZINE/ATIPAMEZOLE  
Lance abscess.  
Blood sample: (EDTA) (12:00.0) Hematology/Chemistry/Serology results.  
WBC:9.30 \*10<sup>3</sup>/UL; HCT: 24.0%; BUN:10 MG/DL;  
Purpose/Problem: crack - left rear foot (Confirmed); Give 5 packets on  
Rx: UNIPRIM 75gm PO SID for 7 days.  
Clinical note recorded. (REJ)  
Clinical note recorded. (REM)
- Weight: 2829 Kg ( 6235
- 3.May Purpose/Problem: crack - left rear foot (Confirmed)  
Rx: FLUNIXIN MEGLUMINE 3000mg PO SID for 3 days. (1.06 mg/kg)  
Clinical note recorded. (REJ)

Medical History Report - Summary for Individual Specimen  
ST. LOUIS ZOOLOGICAL PARK

=====

ELEPHAS MAXIMUS (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

=====

.....2001....

- 6.Mar Clinical note recorded. (REJ)
- 7.Mar Clinical note recorded. (REM)
- 8.Mar Clinical note recorded. (REJ)
- 9.Mar PROBLEM: tuberculin testing (resolved)
- 15.Mar Clinical note recorded. (REM)
- 16.Mar PROBLEM: annual examination
- Clinical note recorded. (REJ)
- 24.Mar Clinical note recorded. (LMM)
  
- 25.Apr Clinical note recorded. (CJD)
- 28.Apr Clinical note recorded. (CJD)
- 29.Apr Clinical note recorded. (CJD)
  
- 2.May Clinical note recorded. (CJD)
- 5.May Clinical note recorded. (REJ)
- 11.May Clinical note recorded. (REJ)
- 16.May Clinical note recorded. (CJD)
- 23.May Clinical note recorded. (REM)
  
- 5.Jun PROBLEM: tuberculin testing (onset)
- Clinical note recorded. (REJ)
- 6.Jun Clinical note recorded. (REJ)
- 7.Jun Clinical note recorded. (REJ)
- 8.Jun PROBLEM: tuberculin testing (resolved)
- 11.Jun Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.  
NEGATIVE
- Clinical note recorded. (MCB)
- 18.Jun Clinical note recorded. (CJD)
- Clinical note recorded. (LMM)
- 25.Jun Clinical note recorded. (REM)
  
- 2.Jul Clinical note recorded. (REM)
- 10.Jul Clinical note recorded. (LRP)
- 13.Jul Clinical note recorded. (REM)
  
- 1.Aug Purpose/Problem: Arthritis pain
- Rx: FLUNIXEN MEGLUMINE mg PO q48h until further notice. (0.7 mg/kg)
- Clinical note recorded. (REJ)
- 9.Aug Blood sample: (EDTA) Hematology results,  
WBC:7.10 \*10<sup>3</sup>/UL; HCT: 27.0%;
- 22.Aug Purpose/Problem: crack - left rear foot (Confirmed)
- Rx: PHENYLBUTAZONE 7.07gm PO q48h until further notice. (2.50 mg/kg)
- Clinical note recorded. (REJ)
  
- 1.Oct Clinical note recorded. (REM)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

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**Clinical Note:**

18.Feb.2000

Problem: crack - left rear foot (Confirmed)  
Sole abscess appears to have ruptured. Examination of sole reveals a soft tender spot approx 8 cm medial to lesion between toes. Also an open tract is present from this spot to the lateral foot wall. The previously swollen area is less swollen but larger diameter, suggesting ruptured abscess. Treatment changed to alternating soaks with nolvasan or dilute bleach once, then saturated epsom salt soak on an alternating basis. (REJ)

---

**Clinical Note:**

20.Mar.2000

Problem: crack - left rear foot (Confirmed)  
No change in lameness, occasionally seen to lie down during the day (not usually done), keepers report that "flap" is seen on bottom of sole, no discharge from that area, but raises concerns of keeping overall foot moist, duration and progression of lesion raises concerns of potential osteomyelitis, keepers inquired about possible analgesics, suggested flunixin or phenylbutazone for a short period, they are to discuss with head keeper tomorrow. (REM)

---

**Clinical Note:**

23.Mar.2000

Problem: crack - left rear foot (Confirmed)  
Specimen reluctant to lift left hind foot. Managed brief visual examination of sole. Marked cracks and furrows present, and large flap (5 cm by 10 cm) evident overlying 1 to 2 cm deep cavity, reasonably clean. Nails on front feet also appear overgrown. (CJD)

---

**Clinical Note:**

8.Apr.2000

Problem: crack - left rear foot (Confirmed)  
Re-examination of foot. Ventral flap has extended cranially, dermis exposed and very sensitive. Skin around heel is braking down. Lateral aspect of foot is warm to the touch. Has developed slight ventral edema (no lymph node palpable) to left of vulva. Keepers attempting to collect blood sample. (CJD)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (B,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

19.Apr.2000

Problem: crack - left rear foot (Confirmed)  
Specimen manually restrained in chute. Weight 2797 kg. Sedated with an initial dose of 400 mg xylazine IM by handsyringe, and supplemented at 20 minutes with 100 mg IM, at 40 minutes with 200 mg IM, and at 120 minutes with 100 mg IM. Chute rotated through 90 degrees so elephant in right lateral recumbency. Initial SpO2 of 83 %, abdominal straps loosened, no further reading obtained from pulse oximeter. Left hind foot showed marked undermining of sole. Loose horn removed, thin horn / dermis exposed of most of the solar surface. Large (approximately 20 cm by 10 cm) trough filled with granulation tissue + necrotic debris. Swab collected for bacterial culture. 12 ml lidocaine infused into lesion, debrided by sharp excision back to healthy tissue. Bathed with dilute Nolvasan solution, cauterized with Koppertox, covered with gauze swabs, and overlying plastic boot fitted and secured with adhesive tape. Caudo-cranial skylight radiographs taken (70 kV, 0.3 to 1.0 second) of all feet - no obvious osteomyelitis within digit of left hind foot. Blood sample collected from medial metatarsal and tail veins - EDTA and serum - for CBC and superchem profile. Attempts to administer IV fluids failed, small amount given SQ. Chute returned to upright position. Anesthesia reversed at 200 minutes with 50 mg atipamezole IM by handsyringe. Recovery uneventful.  
Rx: KETOPROFEN 2000 mg IM once for 1 day.  
Rx: AMPICILLIN TRIHYDRATE 25000 mg IM once for 1 day.  
Rx: UNIPRIM 75 gm PO SID until further notice.  
Rx: COVEXIN 8 2 ml IM once for 1 day. (CJD)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

2.May.2000

Problem: crack - left rear foot (Confirmed)  
Placed into ERD, sedated with 500 mg xylazine. This produced very light sedation. Area over left hip examined. Area is superficially abraded, erythematous, and warm, however does not feel fluid filled. Multiple attempts to aspirate with a 16 ga needle did not produce fluid. Areas on left side of face and left elbow also cleaned and debrided. These three sites are decubital ulcers from prolonged recubancy, but no evidence of internal abscessation is detectable. Blood collected for CBC, chem profile, weight = 6235#. Reversed with 50 mg atipamazole IM. (REJ)

---

Clinical Note:

2.May.2000

Problem: crack - left rear foot (Confirmed)  
Rx: UNIPRIM 75 gm PO SID for 7 days. (REM)

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Medical History Report - Individual Specimen  
ST. LOUIS ZOOLOGICAL PARK

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ELEPHAS MAXIMUS (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

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Purpose: crack - left rear foot (Confirmed)  
Give 5 packets once a day for 7 days,.

Prescription Data >>

Starting date: 2.May.2000

Drug: UNIPRIM 75 gm PO SID for 7 days  
Formulation: 400.0 mg/gm powder  
Prescribed by: REM (2.May.2000)

Filled by: JM (2.May.2000)  
Treatment weight: 2752 kg

Comments >>

Give 5 packets orally once a day for 7 days.  
UNIPRIM = TRIMETHOPRIM + SULFADIAZINE

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Clinical Note:

3.May.2000

Problem: crack - left rear foot (Confirmed)  
Rx: FLUNIXIN MEGLUMINE 3000 mg PO SID for 3 days. (REJ)

---

Purpose: crack - left rear foot (Confirmed)

Prescription Data >>

Starting date: 3.May.2000

Drug: FLUNIXIN MEGLUMINE 3000 mg PO SID for 3 days  
Formulation: 25.00 mg/gm granules  
Prescribed by: REJ (3.May.2000)  
Drug dosage: 1.06 mg/kg

Filled by: REJ (3.May.2000)  
Treatment weight: 2829 kg

Comments >>

Tradename of drug used is BANAMINE GRANULES.

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Clinical Note:

4.May.2000

Problem: crack - left rear foot (Confirmed)  
CBC shows normocytic normochromic anemia (RBC  $2.0 \times 10^6$ /uL, HGB 8.0,  
HCT 24 %). clinical chemistry within normal limits. (CJD)

=====

**ELEPHAS MAXIMUS (no subsp)**  
**INDIAN ELEPHANT (E,I)**  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

**Parasitology Examination:**

**Submission Data >>**

Type: Fecal sample  
Purpose: ROUTINE EXAMINATION

Sample id.: 2000-0584  
Date collected: 12.Jun.2000  
Time collected: 9:00

**Collected from:**

From an individual specimen.

Enclosure: EH

**Examination Data >>**

Storage: room temperature  
Consistency: formed  
Gross appearance: Typical

Date examined: 12.Jun.2000  
at: 11:00  
by: LM

**Tests & Results >>**

FLOATATION - NA NITRATE                      NEGATIVE

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**Clinical Note:**

13.Jun.2000

Problem: crack - left rear foot (Confirmed)  
Collected trunk wash sample for mycobacterial culture (third sample).  
(REJ)

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**Clinical Note:**

20.Jul.2000

Problem: crack - left rear foot (Confirmed)  
Re-examination of feet. Left footpad shows marked reduction in size of defect, now only 2 to 3 inches in diameter, 1 inch deep, although some deterioration in last 2 weeks since completing course of antibiotics. To continue debriding, bathing in Betadine, spraying with Chitosan, and covering with sandal during the day and night. Right footpad shows a new defect, approximately 2 inches in diameter, 0.5 inch deep, but undermining ventro-laterally for 5 inches. To cut back overlying sole, commence bathing in Betadine, spraying with Chitosan, and covering with sandal. Front footpads show small cuts. Appetite has improved, activity and demeanor had improved but deteriorated a little over last 2 weeks. Decide to continue prophylactic antibiotics. (CJD)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

15.Mar.2001

Problem: crack - left rear foot (Confirmed)  
Trunk washes from January 1, 3 and 4 are negative for mycobacterial growth. (REM)

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Clinical Note:

16.Mar.2001

Problem: crack - left rear foot (Confirmed); annual examination  
Annual physical examination. General condition good. Unable to examine molars. Feet: both front feet in good condition, cuticles dry, being treated with lanolin. Right rear - 3 shallow cracks in sole, appropriately trimmed and beveled. Left rear - solar abscess continues to heal. Deficit is now approx 2 cm, and shallow, with fatty pad material exposed. No undermining or discoloration is noticed around the hole. Wearing sandal daily. (REJ)

---

Clinical Note:

24.Mar.2001

Problem: crack - left rear foot (Confirmed)  
UA from catch urine run. pH=8, Sp.Grav. 1.010, Negative for protein, glucose, ketones, bilirubin, blood, and W.B.C..  
Color= straw  
Transp.=cloudy (LMM)

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<i>ELEPHAS MAXIMUS</i> (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

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**Clinical Note:** 18.Jun.2001

Problem: crack - left rear foot (Confirmed)  
Examination of left hind foot - small central lesion, large undermining crack on lateral aspect, no obvious lameness. Keepers to obtain a new boot, to continue debriding area and cleaning thoroughly (Iodine soaks), and to attempt flushing through lesion with very dilute Nolvasan solution or water. (CJD)

---

**Clinical Note:** 18.Jun.2001

Problem: crack - left rear foot (Confirmed)  
Urinalysis from catch urine. Light yellow, transp= cloudy, Sp.Grav=1.005, Ph=8.0, Protien, glucose, bilirubin, blood, urobilinogen= all negative. (LMM)

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**Clinical Note:** 25.Jun.2001

Problem: crack - left rear foot (Confirmed)  
Keepers had let animal out in to yard, but report that lesion is looking much better, recheck in 2- 3 days. (REM)

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**Clinical Note:** 2.Jul.2001

Problem: crack - left rear foot (Confirmed)  
Was able to observe bottom of foot with keeper, they continue to pare out infected central area to keep tract open for drainage and flushing, started novalsan (in lieu of betadyne) two days ago, still also working on lateral undermined area. (REM)

---

**Clinical Note:** 10.Jul.2001

Problem: crack - left rear foot (Confirmed)  
Phone conversation with keepers- elephants are staying outside. Wound in left hind foot appears to be filling in, and elephant is walking better, appears to be doing well. (LRP)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (B,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

13.Jul.2001

Problem: crack - left rear foot (Confirmed)  
Wound on sole of foot is nearly gone, crack at rear appears deeper,  
but suspect that it has just been excavated more, strongly advise to  
continue to follow black line in that crack as it may lead completely  
under heel, smaller crack also noted on lateral side of foot, but  
seems dry and appears that keepers have gotten to the bottom of it,  
recheck next week. (REM)

---

Clinical Note:

1.Aug.2001

Problem: crack - left rear foot (Confirmed)  
Keepers report arthritis pain seems to be more prominent and  
consistent. will begin on analgesics and monitor efficacy.  
Rx: FLUNIXIN MEGLUMINE 2000 mg (4 packets) PO q48h until further  
notice. (REJ)

---

Purpose: Arthritis pain

Prescription Data >>

Starting date: 1.Aug.2001

Drug: FLUNIXIN MEGLUMINE mg PO q48h until further notice

Formulation: 25.00 mg/gm granules

Prescribed by: REJ (1.Aug.2001)

Filled by: REJ (1.Aug.2001)

Drug dosage: 0.7 mg/kg

Treatment weight: 2829 kg

Comments >>

Tradename of drug used is BANAMINE GRANULES.

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

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Clinical Note:

16.Dec.2001

Problem: crack - left rear foot (Confirmed); pustules - left ear  
(Suspected); crack - right rear limb (Confirmed)  
Acute onset bilaterally symmetrical ulcers on mucosal lining of lower  
mandible, cranial to premolar dentition. Suspect traumatic origin, no  
treatment warranted. Keepers also noticed that sole of right hind foot  
is soft and can be undermined where lateral nail cracks start.  
Recommend daily soaking in dilute Betadine and to continue corrective  
foot trimming. (LRP)

Clinical Note:

20.Dec.2001

Problem: crack - left rear foot (Confirmed); pustules - left ear  
(Suspected); crack - right rear limb (Confirmed)  
Soft spot in center of right hind sole is still present and sole is  
soft medially, but does not appear to connect to cracks on lateral  
nail as reported by keepers. Recommend to continue soaking twice  
daily, try to undermine sole defect. (LRP)

Clinical Note:

8.Jan.2002

Problem: crack - left rear foot (Confirmed); pustules - left ear  
(Suspected); crack - right rear limb (Confirmed)  
Annual examination. Ocular exam revealed slight lenticular cloudiness  
but retinas clearly visible. Oral exam normal, mucus membranes healthy  
and pink, molars appear normal. Left elbow has thick callus, as does  
left ileal wing pressure point. These are probably from lying down  
more due to age. Left ear has a few raised crusted areas, but  
nolvasan and lanolin treatment appears to be helping. Only rear feet  
examined. Left rear sole has a 5 cm round deficit near the center,  
still residual from previous abscess. There is soft proliferative  
tissue in this deficit that is tender to touch. Ultrasound of this  
foot revealed moderate undermining at the margins of this deficit.  
Radiographs unsuccessful due to positioning. Right rear sole has an  
oblong deficit from near the center toward the medial aspect.  
Ultrasound of this sole reveals an undermined area at the caudal edge  
of the deficit, with a echodense area in the center. Radiographs of  
the foot unsuccessful due to positioning. (REJ)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

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**Clinical Note:**

4.Feb.2002

Problem: crack - left rear foot (Confirmed); pustules - left ear  
(Suspected); crack - right rear limb (Confirmed)

Recheck assessment by REJ:

Left rear foot has deteriorated: Sole between the previous defect is undermined all the way to the 3rd nail and keepers report a tract to the cuticle of this nail as well. Recommend removing entire undermined sole to allow healing and advised that nail may slough.

REJ recommended: 1) keep left foot in sandal most of the time, 2) remove sole flap, 3) soak twice daily with disinfectants (betadine, nolyasan, or dilute bleach). Recommend to discontinue use of chitosan or CopperTox, and advise not to pack gauze into wound.

Despite animal's age, if animal does not tolerate implementation of all recommendations, recommend considering anesthesia for proper debridement of sole in order to avoid risks and consequences of P3 osteomyelitis.

Right Rear Foot is improving. REJ suggested alternating disinfectant and epsom salts as the hole continues to fill in. (LRP)

---

**Clinical Note:**

18.Feb.2002

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

Recheck examination (and consultation with Dr. Dennis Schmidt, Southwest Missouri State University):

Left Rear Foot: Soft, undermined abscess just cranial to midpoint of sole and extending towards 6-8 o'clock position where base of nail is present. Nail may slough. Recommend debriding all necrotic material, remove necrotic tissue until healthy tissue is exposed, recommend filing nail down significantly to minimize weight bearing on this nail and relief "torque" forces acting at base of nail. Continue soaking, wearing protective sandal.

Right rear foot: Significantly improved from last exam. Defect (center of sole) is reduced in size. Recommend continued debridement and soaking, wear sandal. (LRP)

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ELAPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

---

**Clinical Note:**

8.Apr.2002

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

CBC shows a mild leukocytosis (18 \* 1000/dL) with neutrophilia (67 %) when compared to ISIS reference ranges. Mild hypochromic, normocytic anemia is reported. (LRP)

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**Clinical Note:**

13.Apr.2002

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

Specimen is negative for Leptospira species. (CJD)

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**Clinical Note:**

16.Apr.2002

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

Mycobacterial culture from 29JAN02 was negative at NVSL. (REM)

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**ELEPHAS MAXIMUS** (no subsp)  
**INDIAN ELEPHANT** (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

**Clinical Note:**

24.Jan.2003

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

Ultrasound examination of rear foot pads.

Right foot - A 2 cm wound is present near the center of the front third of the sole. This wound is 1-2 cm deep, and the sole at the perimeter is slightly undermined. Ultrasonography reveals the sole near the wound to be significantly thinner, due to wound trimming.

No draining tracts, abscesses, or deep punctures are detected.

Left Foot - A 2 cm wound is present near the center of the front third of the sole. This wound is 2 cm deep, but no tracts are present. A second soft spot is present approximately 5 cm from the first wound. This spot is covered by intact sole. However, ultrasound identified a 2 cm fluid pocket approximately 2 cm deep from the sole surface. This pocket has a echo-dense object in the center. This area will be monitored for possible abscessation. (REJ)

**Clinical Note:**

25.Jan.2003

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

CBC shows mild leukocytosis with 10% eosinophils (marked eosinophilia). (LRP)

**Clinical Note:**

30.Jan.2003

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

Lab results for vitamin D (25-hydroxy) = 31 nmol/L. Lab notes that no normal values for elephants exist, but previous samples from other zoos ranged from 12-29 nmol/L. (REM)

**Clinical Note:**

31.Jan.2003

Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)

Ultrasound examination of left rear foot. Digital image taken. Fluid pocket still present, measured 13.3 mm x 9.6 mm, with solid object in the center. The fluid pocket is 2 cm deep in the foot pad, lying over a soft spot in the pad. (REJ)

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note: 10.May.2003  
Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)  
CBC shows mild leukocytosis (14,000 / uL) with 80% neutrophilia. (LRP)

---

Clinical Note: 29.May.2003  
Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)  
Fecal Floatation; negative (AJB)

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Submission Data >>  
Type: Fecal sample  
Purpose: ROUTINE EXAMINATION

Sample id.: 2003-0443  
Date collected: 29.May.2003  
Time collected: 9:00

Collected from:  
Group of specimens housed together.

Enclosure: RE

Examination Data >>  
Storage: room temperature  
Consistency: soft  
Gross appearance: Typical

Date examined: 29.May.2003  
at: 14:00  
by: LMM

Tests & Results >>  
FLOATATION - NA NITRATE

NEGATIVE

1+

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Clinical Note: 31.May.2003  
Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)  
Ultrasonography of sole of right hind foot shows previously recognized  
pocket of fluid, approximately 2-3 cm from surface. Pocket appears to  
be extending longitudinally towards mid-point region of sole, where it  
is tender to palpation. Hyperchoic linear structure is still present.  
(LRP)

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ELPHAS MAXIMUS (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

=====

Clinical Note: 7.Nov.2003  
Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)  
Results of CBC and chem profile (in house) within normal limits. (REJ)

Submission Data >> Sample id.: 2003-1085  
Type: Fecal sample Date collected: 25.Nov.2003  
Purpose: ROUTINE EXAMINATION Time collected: 9:00

Collected from: Enclosure: RE  
Group of specimens housed together.

Examination Data >> Date examined: 26.Nov.2003  
Storage: room temperature at: 9:45  
Consistency: formed by: MK  
Gross appearance: Typical

Tests & Results >>  
FLOATATION - NA NITRATE NEGATIVE 1+

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Clinical Note: 26.Nov.2003  
Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)  
Fecal Floatation: negative (AJB)

Clinical Note: 28.Nov.2003  
Problem: crack - left rear foot (Confirmed); crack - right rear limb  
(Confirmed)  
Right rear foot pad completely healed, no longer wearing protective  
sandal. Left rear foot has significant deficit starting near the  
middle of the pad and angling toward the lateral toe nail. Ultrasound  
examination reveals a fluid pocket approx 3 cm deep from the sole, and  
3x5 cm size. Will continue to monitor pad and pocket. (REJ)

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<b>ELEPHAS MAXIMUS (no subsp)</b>	<b>Sex: Female</b>	<b>Acc. #: 055667</b>
<b>INDIAN ELEPHANT (E,I)</b>	<b>Age: 52Y Est.</b>	<b>Birth: 14.Apr.1953</b>
<b>Name: Clara</b>		

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**Clinical Note:** 19.Dec.2003  
Problem: crack - left rear foot (Confirmed)  
Keepers report attitude better, eating most of offered food. Will repeat bloodwork next week. (REJ)

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**Clinical Note:** 20.Dec.2003  
Problem: crack - left rear foot (Confirmed)  
Blood culture shows no growth at 24 hrs. (LRP)

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**Clinical Note:** 21.Dec.2003  
Problem: crack - left rear foot (Confirmed)  
Partial fecal culture result - abundant growth of E coli. Partial blood culture shows no growth at 48 hours. (EKT)

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**Clinical Note:** 22.Dec.2003  
Problem: crack - left rear foot (Confirmed)  
Final fecal culture (Antech CHAC09940294) shows abundant growth of E coli, and moderate growth of Klebsiella pneumoniae and Group D Enterococcus. Negative for Salmonella, Shigella, Campylobacter. Blood culture shows no growth after 72 hours (Antech CHAC09936504). (EKT)

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**Clinical Note:** 26.Dec.2003  
Problem: crack - left rear foot (Confirmed)  
Sole infection (left rear) has dissected towards lateral toenail. The area of undermined sole was trimmed away by the keeper. Unable to locate previously noted deep fluid pocket, possibly due to irregular surface now present where sole is trimmed and fat pad exposed. Blood collected for CBC, chem. STAT chem normal (BUN=8.4 mg/dl, creat 1.4 mg/dl, TP=7.7 g/dl, glob=4.5 g/dl). (REJ)

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=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

18.Feb.2004

Problem: crack - left rear foot (Confirmed); tuberculin testing  
Proc: Annual trunk wash, day 2/3. 60 ml sterile saline infused into trunk, held for 10-20 seconds, elephant asked to blow saline into a sterile receptacle. (MW)

---

Clinical Note:

19.Feb.2004

Problem: crack - left rear foot (Confirmed); tuberculin testing  
Annual trunk wash (3/3) was collected using 60 ml of sterile saline infused into trunk before elephant blew it back into container to be submitted for Mycobacterial culture. (LRP)

---

Clinical Note:

27.Feb.2004

Problem: crack - left rear foot (Confirmed)  
Examination of hind feet. Right rear foot has no open lesions. Sole is hard and in excellent condition, with the exception of a single 3 cm diameter region of soft pad at @11 o'clock. Plan to remove sandal from this foot until further notice.

LEFT foot has two major defects. An approximately 2cm diameter soft defect is present off center at @11 o'clock (approx. 3 cm from center of foot). This area has a concave pad erosive lesion with minimal necrotic tissue around the edges. Ultrasonography of this area (using ALOKA portable ultrasound unit with a 7.5 MHz linear probe) shows that lesion does not extend into deeper tissues and should heal slowly by secondary re-epithelialization. A larger defect is present around 7 o'clock. This defect is approximately 1.5 cm diameter at surface. Ultrasonography shows a 3cm wide x 1 cm deep area of hypoechogenicity approximately 4 cm deep from surface of pad. A single hypoechoic line is present longitudinally, extending from surface into the deeper pocket (draining tract?). Plan to repeat ultrasonographic exam in 2 weeks. Protective sandal should be worn on this foot to prevent foreign material/debris from aggravating defect. (LRP)

---

Clinical Note:

12.Mar.2004

Problem: crack - left rear foot (Confirmed)  
O: Urinalysis results - pH 8.5, USG 1.013. Occasional epithelial cell, no RBCs, no WBCs. All other values unremarkable. (MW)

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**ELEPHAS MAXIMUS** (no subsp)  
**INDIAN ELEPHANT** (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

**Clinical Note:**

9.Jul.2004

Problem: crack - left rear foot (Confirmed)

O: CBC results - hct 31%, WBC 15,100 26% neuts, 23% lymphs, 50% monos, 1% eos.

In-house differential - 33% neuts, 25% lymphs, 39% monos, 3% eos.

A: Absolute and relative monocytosis on AVLs differential, suspect this reflects a laboratory error. (MW)

---

**Clinical Note:**

10.Jul.2004

Problem: crack - left rear foot (Confirmed)

Obs: Ultrasound exam of both feet. Small amount of fluid appreciated under damaged surface on both feet. Right foot has a 3x3 cm soft area near the center of the foot. Left foot has a 1.5x5 fissure near middle toe. Keepers continue to trim feet, flush, and soak. Animal is wearing sandals on both rear feet. (MW)

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=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

=====

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

Clinical Note:

9.Jul.2004

Problem: crack - left rear foot (Confirmed)

O: CBC results - hct 31%, WBC 15,100 26% neuts, 23% lymphs, 50%  
monos, 1% eos.

In-house differential - 33% neuts, 25% lymphs, 39% monos, 3% eos.

A: Absolute and relative monocytosis on AVLs differential, suspect  
this reflects a laboratory error. (MW)

---

Clinical Note:

10.Jul.2004

Problem: crack - left rear foot (Confirmed)

Obs: Ultrasound exam of both feet. Small amount of fluid appreciated  
under damaged surface on both feet. Right foot has a 3x3 cm soft area  
near the center of the foot. Left foot has a 1.5x5 fissure near  
middle toe. Keepers continue to trim feet, flush, and soak. Animal  
is wearing sandals on both rear feet. (MW)

---

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ELEPHAS MAXIMUS (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

---

Clinical Note: 15.Apr.2005

Problem: crack - left rear foot (Confirmed)

O: CBC results (AVL) - hct 32%, WBC 15,500 23% neuts, 29% lymphs, 48% monos.

CBC results (SLZ) - 21% neuts, 26% lymphs, 52% monos, 1% eos.

Chem panel results - within normal limits. (MW)

---

Clinical Note: 21.Apr.2005

Problem: crack - left rear foot (Confirmed)

O: Trunk wash Mycobacterial culture results negative for 2/1/05, 2/2/05, and 2/3/05 (NVSL). (MW)

---

Clinical Note: 28.Apr.2005

Problem: crack - left rear foot (Confirmed)

Rx: PHENYLBUTAZONE 12000 mg PO SID until further notice. (MW)

---

Purpose: Pain management

Prescription Data >>

Starting date: 28.Apr.2005

Drug: PHENYLBUTAZONE 12000 mg PO SID until further notice

Formulation: 1000.0 mg tablet

Prescribed by: MW (28.Apr.2005)

Filled by: MW (28.Apr.2005)

Drug dosage: 4.73 mg/kg

Treatment weight: 2536 kg

---

Clinical Note: 4.May.2005

Problem: crack - left rear foot (Confirmed)

Rx: PHENYLBUTAZONE 12000 mg PO SID until further notice. (REJ)

---

Purpose: Give (12000mg) 12 tablets orally, once a day, until further notice

Prescription Data >>

Starting date: 4.May.2005

Drug: PHENYLBUTAZONE 12000 mg PO SID until further notice

Formulation: 1000.0 mg tablet

Prescribed by: REJ (3.May.2005)

Filled by: PM (3.May.2005)

Treatment weight: 2536 kg

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Comments >>

Give (12000mg) 12 tablets orally, once a day, until further notice.

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=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: D55667  
Birth: 14.Apr.1953

=====

Clinical Note:

19.May.2005

Problem: crack - left rear foot (Confirmed)

O: CBC results - hct 28.1%, WBC 9,800 21% neuts, 1% bands, 27%  
lymphs, 48% monos, 3% eos.

Chem panel results - BUN 24.3 mg/dl, creat 1.4 mg/dl, phos 8.8  
mg/dl

A: Moderate anemia, results for the past year checked and this animal  
has hovered between 28 - 32% hematocrit. Need to continue to monitor  
this. Elevated BUN and phosphorus may suggest some renal compromise.  
Creatinine remains normal at this time.

P: Discuss findings with ZM and curator. Suggest checking a urine  
sample to help assess renal function. Recheck values in 2 weeks. (MW)

---

Clinical Note:

20.May.2005

Problem: crack - left rear foot (Confirmed)

Obs: ZM reports that animal is doing very well on phenylbutazone with  
improvement in attitude and mobility. (MW)

---

Submission Data >>

Type: Fecal sample  
Purpose: ROUTINE EXAMINATION

Sample id.: 2005-0411  
Date collected: 26.May.2005  
Time collected: 9:30  
Collected by: CR

Collected from:

From an individual specimen.

Enclosure: ELEPHANT

Examination Data >>

Storage: room temperature  
Consistency: formed  
Gross appearance: Typical

Date examined: 27.May.2005  
at: 11:00  
by: PM

Comments >>

Fecal Floatation: Strongyloides +

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

27.May.2005

Problem: crack - left rear foot (Confirmed)  
Fecal Floatation: Strongyloides+ (CAF)

---

Clinical Note:

28.May.2005

Problem: crack - left rear foot (Confirmed)  
Rx: PHENYLBUTAZONE 12000 mg PO SID until further notice. (REJ)

---

Purpose: Give (12000mg) 12 tablets orally, once a day, until further notice

Prescription Data >>

Starting date: 28.May.2005

Drug: PHENYLBUTAZONE 12000 mg PO SID until further notice

Formulation: 1000.0 mg tablet

Prescribed by: REJ (27.May.2005)

Filled by: PM (27.May.2005)

Treatment weight: 2536 kg

Comments >>

Give (12000mg) 12 tablets, orally, once a day, until further notice.

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Clinical Pathology Records - Specimen Report  
ST. LOUIS ZOOLOGICAL PARK

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

Collection Information >>

Health Status: Normal  
Fasting Time: < 8 hours  
Activity: Calm  
Weight: 2536 Kg on 26.Jan.2005  
Manual restraint used.

Date of Collection: 1.Jun.2005  
Time of Collection:  
Collected by:  
Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>

Anticoagulant: EDTA  
Storage: Fresh  
Sample Quality: No quality problems.

Laboratory: ADV. VET LG MAM  
Date of Analysis: 1.Jun.2005  
Time of Analysis:  
Analysis by:  
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	10.7		*10 <sup>3</sup> /UL
RED BLOOD CELL COUNT	2.76		*10 <sup>6</sup> /UL
HEMOGLOBIN	< 11.0		GM/DL
HEMATOCRIT	< 31.8		%
MCV	115		fL
MCH	39.9		ug
MCHC	34.6		gm/dL
SEGMENTED NEUTROPHILS	28	(2.996)	% (*10 <sup>3</sup> /UL)
NEUTROPHILIC BANDS	2	(0.214)	% (*10 <sup>3</sup> /UL)
LYMPHOCYTES	28	(2.996)	% (*10 <sup>3</sup> /UL)
MONOCYTES	39	(4.173)	% (*10 <sup>3</sup> /UL)
EOSINOPHILS	3	(0.321)	% (*10 <sup>3</sup> /UL)
PLATELET COUNT	438		*10 <sup>3</sup> /UL

Morphology Results >>

TARGET CELLS 2+

Clinical Pathology Records - Specimen Report  
ST. LOUIS ZOOLOGICAL PARK

ELEPHAS MAXIMUS (no subsp)	Sex: Female	Acc. #: 055667
INDIAN ELEPHANT (E,I)	Age: 52Y Est.	Birth: 14.Apr.1953
Name: Clara		

Collection Information >>

Health Status: Normal  
 Fasting Time: < 8 hours  
 Activity: Calm  
 Weight: 2536 Kg on 26.Jan.2005  
 Manual restraint used.

Date of Collection: 1.Jun.2005  
 Time of Collection:  
 Collected by:  
 Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Serum  
 Storage: Fresh  
 Sample Quality: No quality problems.

Laboratory: SL2  
 Date of Analysis: 1.Jun.2005  
 Time of Analysis:  
 Analysis by:  
 Automated analysis.

Tests and Results >>

	GLUCOSE	69	MG/DL
	BLOOD UREA NITROGEN >>	24.4	MG/DL
	CREATININE	1.6	MG/DL
	BUN/creatinine ratio	15.3	
	CALCIUM >	11.6	MG/DL
	PHOSPHORUS >>	8.9	MG/DL
	calcium/phosphorus ratio	1.30	
	TOTAL PROTEIN (COLORIMETRY) >	9.0	GM/DL
	ALBUMIN (COLORIMETRY)	3.5	GM/DL
	GLOBULIN (COLORIMETRY)	5.5	GM/DL
	albumin/globulin ratio	0.636	
	ASPARTATE AMINOTRANSFERASE	19	IU/L
	ALKALINE PHOSPHATASE	102	IU/L
	CREATINE PHOSPHOKINASE	246	IU/L
	ALBUMIN GLOBULIN RATIO	0.6	GM/DL
	BUN/CREATININE RATIO	15.2	MG/DL
	GAMMA GLUTAMYLTRANSFERASE	10	IU/L

=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: Clara

Sex: Female  
Age: 52Y Est.

Acc. #: 055667  
Birth: 14.Apr.1953

=====

Clinical Note:

6.Jun.2005

Problem: crack - left rear foot (Confirmed)  
UA pH 8.5, protein, glucose, blood and bilirubin negative, ketones  
negative, Sp.Gr. 1.015, color medium yellow, transp. clear. (JM)

---

Clinical Note:

16.Jun.2005

Problem: crack - left rear foot (Confirmed)  
Oral phenylbutazone dose reduced to 9 g SID. (REJ)

---

Clinical Note:

21.Jun.2005

Problem: crack - left rear foot (Confirmed)  
RX: PYRANTEL PAMOATE 16500 mg PO SID for 2 days. (REJ)

---

Purpose: crack - left rear foot  
Give 330 mls orally for two consecutive days.

Prescription Data >>

Starting date: 21.Jun.2005

Drug: PYRANTEL PAMOATE 16500 mg PO SID for 2 days

Formulation: 50.00 mg/ml suspension

Prescribed by: REJ (21.Jun.2005)

Filled by: JEA (21.Jun.2005)

Treatment weight: 2536 kg

Comments >>

Give 330 mls orally for two consecutive days.

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Clinical Pathology Records Report - ISIS/In-House Reference Values  
ST. LOUIS ZOOLOGICAL PARK

Scientific name: *ELEPHAS MAXIMUS*  
Common Name: INDIAN ELEPHANT (E,I)

		ISIS Values			In-House Values				
		Mean	S.D.	(N)	Mean	S.D.	Min.	Max.	(N)
WBC	*10 <sup>3</sup> /UL	14.41 ±	4.418	(920)	12.04 ±	4.20	5.800	24.00	(100)
RBC	*10 <sup>6</sup> /UL	3.11 ±	0.55	(778)	2.765 ±	0.339	2.140	3.990	(98)
HGB	GM/DL	13.3 ±	2.1	(814)	12.27 ±	1.30	9.600	15.70	(100)
HCT	%	37.7 ±	5.8	(987)	34.46 ±	3.55	26.90	43.20	(98)
MCH	MG/DL	43.4 ±	4.9	(752)	45.60 ±	11.13	30.91	153.0	(100)
MCHC	ung	35.4 ±	3.7	(808)	35.60 ±	1.47	28.07	39.02	(100)
MCV	fL	122.4 ±	15.6	(773)	128.6 ±	31.1	110.3	430.1	(99)
SEGS	*10 <sup>3</sup> /UL	4.927 ±	2.953	(704)	4.208 ±	1.890	0.000	12.38	(95)
BANDS	*10 <sup>3</sup> /UL	0.431 ±	0.660	(124)	0.127 ±	0.501	0.000	2.940	(42)
LYMPHOCYTES	*10 <sup>3</sup> /UL	5.635 ±	3.373	(705)	5.335 ±	2.944	1.680	15.43	(97)
MONOCYTES	*10 <sup>3</sup> /UL	3.517 ±	2.925	(567)	1.594 ±	1.524	0.000	5.880	(90)
EOSINOPHILS	*10 <sup>3</sup> /UL	0.483 ±	0.540	(529)	0.281 ±	0.277	0.000	1.533	(85)
BASOPHILS	*10 <sup>3</sup> /UL	0.124 ±	0.088	(66)	0.045 ±	0.077	0.000	0.292	(63)
NRBC	/100 WBC	0 ±	1	(47)	0.333 ±	0.577	0.000	1.000	(3)
PLATE. CNT.	*10 <sup>3</sup> /UL	549 ±	132	(161)	386.0 ±	144.7	75.00	713.0	(56)
RETICS	%	0.0 ±	0.1	(6)	0.000 ±	0.000	0.000	0.000	(2)
GLUCOSE	MG/DL	88 ±	20	(630)	83.97 ±	19.16	29.00	141.0	(86)
BUN	MG/DL	12 ±	4	(635)	13.78 ±	3.03	6.000	20.00	(88)
CREAT.	MG/DL	1.6 ±	0.4	(599)	1.407 ±	0.216	0.900	1.900	(85)
URIC ACID	MG/DL	0.2 ±	0.2	(249)	0.079 ±	0.142	0.000	0.400	(14)
CA	MG/DL	10.7 ±	0.7	(579)	10.70 ±	0.53	9.500	12.10	(87)
PHOS	MG/DL	5.0 ±	1.0	(461)	5.332 ±	0.773	4.000	7.600	(34)
NA	MEQ/L	130 ±	5	(481)	131.3 ±	3.4	124.0	140.0	(86)
K	MEQ/L	4.6 ±	0.5	(491)	4.628 ±	0.389	3.700	6.100	(83)
CL	MEQ/L	89 ±	4	(460)	87.98 ±	2.92	82.00	95.00	(85)
IRON	MCG/DL	69 ±	23	(60)					
MG	MG/DL	2.00 ±	0.51	(33)	1.818 ±	0.140	1.600	2.000	(11)
HCO3	MMOL/L	25.2 ±	2.8	(25)					
CHOL	MG/DL	45 ±	11	(400)	42.29 ±	8.07	20.00	59.00	(31)
TRIG	MG/DL	50 ±	29	(346)	57.79 ±	32.12	15.00	145.0	(29)
T. PROT. (C)	GM/DL	8.1 ±	0.8	(598)	8.016 ±	0.605	6.600	9.600	(83)
T. PROT. (R)	GM/DL	8.4 ±	0.4	(23)					
ALBUMIN (C)	GM/DL	3.3 ±	0.4	(316)	3.054 ±	0.746	1.800	4.400	(82)
GLOBULIN (C)	GM/DL	5.0 ±	0.9	(312)	5.440 ±	0.865	3.500	8.000	(48)
AST (SGOT)	IU/L	21 ±	13	(607)	16.70 ±	5.05	5.000	40.00	(84)
ALT (SGPT)	IU/L	7 ±	8	(457)	5.511 ±	3.833	0.000	20.00	(47)
T. BILI.	MG/DL	0.2 ±	0.1	(447)	0.244 ±	0.111	0.000	0.500	(84)
D. BILI.	MG/DL	0.1 ±	0.1	(164)	0.050 ±	0.071	0.000	0.100	(2)
I. BILI.	MG/DL	0.1 ±	0.1	(157)	0.050 ±	0.071	0.000	0.100	(2)
AMYLASE	U/L	3600 ±	2366	(70)	5221 ±	391	4633	5855	(13)
ALK. PHOS.	IU/L	139 ±	73	(576)	116.7 ±	53.8	57.00	265.0	(84)
LDH	IU/L	471 ±	357	(352)	499.2 ±	208.0	230.0	1092	(17)

Clinical Pathology Records Report ~ ISIS/In-House Reference Values  
ST. LOUIS ZOOLOGICAL PARK

Scientific name: *ELEPHAS MAXIMUS*  
Common Name: INDIAN ELEPHANT (E,I)

	ISIS Values			In-House Values				
	Mean	S.D.	(N)	Mean	S.D.	Min.	Max.	(N)
CPK IU/L	223 ±	165	(287)	222.5 ±	126.7	61.00	518.0	(19)
OSMOLARITY MOSMOL/L	234 ±	95	(8)	263.1 ±	6.3	251.0	274.0	(44)
ALPHA GLOB. MG/DL	250.4 ±	353.1	(2)	500.0 ±	0.0	500.0	500.0	(1)
ALPHA-1 GLOB GM/DL	1.0 ±	0.0	(1)					
ALPHA-2 GLOB GM/DL	0.7 ±	0.0	(1)					
BETA GLOB. GM/DL	1.0 ±	0.6	(2)	0.600 ±	0.000	0.600	0.600	(1)
Body Temperature:	36.3 ±	0.5	(4)					
CO2 MMOL/L	24.7 ±	3.6	(99)	26.27 ±	1.48	22.00	28.00	(26)
CORTISOL UG/DL	1.8 ±	0.5	(3)					
ESR MM/HR	98 ±	32	(7)	108.5 ±	11.1	81.00	135.0	(26)
FIBRINOGEN MG/DL	387 ±	223	(56)	315.9 ±	58.1	210.0	403.0	(25)
GGT IU/L	7 ±	5	(139)	5.615 ±	3.097	1.000	12.00	(13)
CA++				4.267 ±	0.116	4.200	4.400	(3)
LEPTO. CANI.				400.0 ±	0.0	400.0	400.0	(1)
LEPTO. ICT.				1600 ±	0	1600	1600	(1)
LEPTO. POM.				200.0 ±	0.0	200.0	200.0	(1)
LIPASE U/L	17 ±	28	(22)	25.00 ±	0.00	25.00	25.00	(13)
MEAN PLATELET VOLUME				4.367 ±	0.392	3.500	5.100	(15)
OSMOLALITY MOSMOL/KG				268.6 ±	6.4	259.0	279.0	(14)
PROGESTERONE NG/DL	8.785 ±	38.20	(299)	0.800 ±	0.000	0.800	0.800	(1)
RED CELL DISTRIBUTION WI				15.63 ±	0.91	13.70	17.70	(25)
TESTOSTERONE NG/ML	40.10 ±	0.000	(1)					
VITAMIN E UG/ML	0 ±	0	(2)					
TOTAL T4 MCG/DL	10.5 ±	2.0	(6)					
T3 UPTAKE %	28 ±	2	(2)					
ALBUMIN (E) GM/DL	3.7 ±	0.2	(2)	3.800 ±	0.000	3.800	3.800	(1)
GAMMA GLOB GM/DL	3.1 ±	3.2	(9)	1.800 ±	0.000	1.800	1.800	(1)

## **Appendix 4**

### **Rani Medical Records Relevant Pages**

=====

ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

=====

Sex: Female                      Acc. #: 101145  
Age: 9Y 0M 10D                  Birth: 5.Jul.1996

=====

Parasitology Examination:

Submission Data >>

Type: Fecal sample  
Purpose: QUARANTINE EXAMINATION

Sample id.: 2001-0773  
Date collected: 14.Aug.2001  
Time collected: 9:50

Collected from:

Group of specimens housed together.

Enclosure: RE QUAR

Examination Data >>

Storage: room temperature  
Consistency: formed  
Gross appearance: Typical

Date examined: 14.Aug.2001  
at: 11:40  
by: LCE

Tests & Results >>

FLOATATION - NA NITRATE                  NEGATIVE

-----

Clinical Note:

27.Aug.2001

Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HERPESVIRUS (Suspected)

Keepers report that elephant has been "off" for 1-2 days duration,  
requested and they were able to obtain blood for CBC and SMA,  
reasonably active when observed, difficult to judge if new teeth are  
coming in, keepers noted serous vulvar discharge several days ago and  
"Raja" seemed quite excited, possible early cycle causing behavioral  
changes?, keepers also noted a history of lameness in left rear leg,  
and now wonder if animal is slightly lame on that leg, observe, and  
treat based on laboratory values that should be available tomorrow. (REM)

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ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

Sex: Female  
Age: 9Y 0M 10D

Acc. #: 101145  
Birth: 5.Jul.1996

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**Clinical Note:**

6.Sep.2001

Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)

Staff reports that elephant continues to improve, urine and feces have been unremarkable. Course of antibiotics has been completed and activity level is greatly improved. On visual exam, lameness appears to have resolved and elephant is very active and playful in outside yard. A deep approx 6 cm crack is present on cranial aspect of middle nail of left hind limb. White plaques in roof of mouth are not visible, although small red spots are still present. Laboratory discrepancy noted between PCV readings at St. Mary's (PCV=24%) and Antech (PCV=29%). Both of these are considered as a mild normocytic normochromic anemia. Remaining bloodwork unremarkable based on ISIS reference ranges for species. Plan to repeat bloodwork in 3-5 days, including iron levels, monitor clinical signs, will consider equine oral iron paste supplement. As discussed with zoological manager, suspect hypoferrremia is secondary based on absence of corresponding cell indexes. Requested fresh fecal sample to rule out hookworms (one reported cause of mild anemia in young elephants). (LRP)

---

**Clinical Note:**

7.Sep.2001

Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)

Leptospirosis serology by MA (University of Missouri Diagnostic Lab) is weak positive (1:200) for *L. icterohemorrhagica*, but negative for *L. canicola*, *L. grippotyphosa*, *L. hardjo*, *L. pomona* and *L. bratislava*. Review of blood smear shows no Ehrlichia morula. (LRP)

---

**Clinical Note:**

7.Sep.2001

Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)

Fecal Floatation: Negative. (MCB)

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ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

Sex: Female  
Age: 9Y 0M 10D

Acc. #: 101145  
Birth: 5.Jul.1996

=====

Clinical Note: 17.Sep.2001  
Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)  
Serum chemistry unremarkable, iron levels still pending. (LRP)

---

Clinical Note: 18.Oct.2001  
Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)  
UA pH 8.0, Protein, glucose and blood negative. Sp. Gr. 1.025 (JM)

---

Clinical Note: 7.Dec.2001  
Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)  
Results from fecal sent to University of MO are negative.  
Results from fecal sent to University of IL are negative. (LMM)

---

Clinical Note: 16.Jan.2002  
Problem: anemia (Confirmed); lameness - LEG (LEFT HIND) (Suspected);  
HYPOFERREMIA (Suspected)  
Annual physical exam. Animal is active, playful and cooperative for  
examination. Ocular exam shows moderate bilateral epiphora, no obvious  
explanation. Ear exam unremarkable. Oral exam unremarkable. Right tusk  
is not present (no evidence of emergence), and left tusk is  
unremarkable. Digit #5 right hind leg shows a longitudinal nail crack  
extending into 3/4 of nail - recommend paring to prevent further  
spreading. All four feet show superficial circular deficits, soft  
pads. Fecal swab collected for comprehensive pathogen culture. (LRP)

---

Clinical Note: 19.Jan.2002  
Feces shows an abundant growth of Gram negative organisms, to be  
identified. (CJD)

---

Clinical Note: 22.Jan.2002  
Trunk wash for annual TB testing, day 1 of 3. (REJ)

---

=====

ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

=====

Sex: Female  
Age: 9Y 0M 10D

Acc. #: 101145  
Birth: 5.Jul.1996

Clinical Note: 24.Jan.2002  
Trunk wash for annual TB testing, day 2/3. (REJ)

---

Clinical Note: 29.Jan.2002  
Trunk wash for annual TB testing, day 3/3. (REJ)

---

Clinical Note: 4.Feb.2002  
Final fecal culture shows abundant growth of E.coli, but negative for Shigella, Yersinia, Campylobacter and Salmonella. (LRP)

---

Clinical Note: 13.Feb.2002  
Problem: lameness - HIND LIMBS (Suspected)  
Curator reports stiff hind limb gait. Will dispense NSAID's, then reassess.  
Rx: PHENYLBUTAZONE 3000 mg PO SID for 3 days. (LRP)

---

Purpose: lameness - HIND LIMBS (Suspected)

Prescription Data >> Starting date: 13.Feb.2002  
Drug: PHENYLBUTAZONE 3000 mg PO SID for 3 days  
Formulation: 1000.0 mg tablet  
Prescribed by: LRP (13.Feb.2002) Filled by: LRP (13.Feb.2002)  
Drug dosage: 1.52 mg/kg Treatment weight: 1971 kg

---

Clinical Note: 14.Feb.2002  
Problem: lameness - HIND LIMBS (Suspected); swelling - perineum (Suspected)  
Keepers noticed a firm swelling around perineal region. It is about softball sized (8-10 cm diameter), very firm and not warm to the touch. Animal does not appear uncomfortable when swelling is palpated. Recommend continue anti-inflammatory therapy and monitor closely. (LRP)

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ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

Sex: Female  
Age: 9Y 0W 10D

Acc. #: 101145  
Birth: 5.Jul.1996

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**Clinical Note:**

20.Dec.2002

Urinalysis (In-House):

pH 8.5  
Color: Bright Yellow  
Protein: Trace  
Glucose: Neg  
Ketones: Neg  
Bili: Neg  
Blood: Neg  
Urobili: Normal  
Transp: Clear  
Sp Gravity: 1.013  
Occasional clumps of epithelial cells (TRP)

---

**Clinical Note:**

8.Jan.2003

Weight = 2020kg, normal PE, noted that right tusk is missing from sulcus, end of tail is crooked has been, and somewhat flaccid at site of old bite wound, however no signs of infection our active problem., keepers again note intermittent, chronic left rear leg lameness, but not evident today, blood to be drawn by keepers. (REM)

---

=====

ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

Sex: Female                      Acc. #: 101145  
Age: 9Y 0M 10D                  Birth: 5.Jul.1996

=====

Clinical Note:

17.Mar.2004

Problem: blepharospasm - right eye (Confirmed)  
Blepharospasm has improved by 75% as the animal is now holding the eye open most of the time. The nictitans is still covering 1/2 of the eye. The dorsal palpebrae is slightly swollen. Some clear discharge is present from the medial canthus and on face ventral to the canthus. Cornea looks clear (flashlight evaluation only). Applied triple antibiotic ointment in am and keepers will apply once in pm. (EKT)

---

Clinical Note:

18.Mar.2004

Problem: blepharospasm - right eye (Confirmed)  
CC: Blepharospasm OD  
Obs: Animal holding right eye completely open but nictitans is still pulled medially. Discharge at medial canthus present, suspect some of this is ointment that has been instilled into eye. Animal less photophobic than at last exam, minimal conjunctival swelling.  
A/P: Suspect superficial ocular trauma, appears to be resolving. Instilled triple antibiotic ointment between eyelids in am. Verbal update tomorrow. (MW)

---

Clinical Note:

19.Mar.2004

Problem: blepharospasm - right eye (Confirmed)  
CC: Blepharospasm OD  
Obs: ZM reports that animal is doing very well, eye is held almost completely open.  
P: Resolve. (MW)

---

Clinical Note:

26.Mar.2004

CC: ZM reports abnormal wear to medial nails of hind feet, bilateral.  
Obs: Animal is not showing signs of lameness. Ventral aspect of medial nails on hind feet is deeply worn, somewhat sensitive.  
Ultrasound exam of feet does not reveal any pockets or foreign bodies.  
A/P: Discussed with ZM possibility of abnormal conformation, increased wear due to animals only recently being allowed out after being housed indoors all winter (this animal is very active), trauma on some object in exhibit or holding. Will repeat ultrasound and physical exam in one week to monitor. (MW)

---

=====

ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

Sex: Female  
Age: 9Y 0M 10D

Acc. #: 101145  
Birth: 5.Jul.1996

=====

Clinical Note:  
Fecal Floatation: negative (AJB)

10.Jun.2004

Clinical Note:  
UA pH 8.0, protein trace, glucose neg, ketones trace, bilirubin neg,  
blood neg, urobiligen normal Specific gravity 1.030 (JM)

10.Jun.2004

Clinical Note:  
O: In-house differential - 17% neuts, 45% lymphs, 38% monos.  
CBC results (AVL) - hct 30.2%, WBC 10,500 29% neuts, 43% lymphs,  
27% monos.  
Chem panel results - within normal limits. (MW)

10.Jun.2004

Clinical Note:  
Stiff gait to rear limbs for the last 48 hours. She is very hesitant  
to bend at the knee and the left rear limb is worse than the right.  
She is still moving around the stall and eating well, but she shuffles  
along and even occasionally circumducts her rear limbs to not have to  
bend. Able to urinate and defecate. Elect to treat with 3 days of  
NSAID and re-evaluate. This dose of phenylbutazone is approx  
1.25mg/kg.  
RX: PHENYLBUTAZONE 3000 mg PO SID for 3 days. (EKT)

4.Jul.2004

Purpose: Still rear limbs

Prescription Data >>

Starting date: 4.Jul.2004

Drug: PHENYLBUTAZONE 3000 mg PO SID for 3 days

Formulation: 1000mg pill tablet

Prescribed by: EKT (4.Jul.2004)

Filled by: EKT (4.Jul.2004)

Treatment weight: 1971 kg

Clinical Note:  
Keepers have noticed some improvement to stiffness over the last 24  
hours. (EKT)

5.Jul.2004

=====

ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Rani

Sex: Female  
Age: 9Y 0M 10D

Acc. #: 101145  
Birth: 5.Jul.1996

=====

**Clinical Note:**

10.Aug.2004

No significant findings on in house chemistry. (EKT)

---

**Clinical Note:**

22.Aug.2004

Animal has been moving very slowly for the last 48 hours, but is still eating well. She was hesitant to present her feet except her left hind this morning during training. Oral exam is normal. She was seen playing with tire, but not as energetically as usual. Dispensed phenylbutazone, but keepers will talk to ZM before administering.  
Rx: PHENYLBUTAZONE 3000 mg PO SID for 3 days. (EKT)

---

Purpose: Still rear limbs

**Prescription Data >>**

Starting date: 22.Aug.2004

Drug: PHENYLBUTAZONE 3000 mg PO SID for 3 days

Formulation: 1000mg pill tablet

Prescribed by: EKT (4.Jul.2004)

Filled by: EKT (4.Jul.2004)

Treatment weight: 1971 kg

---

**Clinical Note:**

23.Aug.2004

Animal appears improved in attitude and energy, but not back to normal. Animal did receive phenylbutazone yesterday and will complete the prescription. Eating well. (EKT)

---

**Clinical Note:**

25.Aug.2004

Animal is acting back to normal. Good appetite and energy. There are questions as to whether the episodes of stiffness or decreased energy could be hormonal/cycle related. Could consult with endocrinologist and compare cycle data with the 2 most recent episodes. (EKT)

---

**Clinical Note:**

26.Aug.2004

Consulted with endocrinologist. The episodes can not be correlated to similar events in the repro cycle. (EKT)

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## **Appendix 5**

### **Ellie Medical Records Relevant Pages**

=====

ELEPHAS MAXIMUS INDICUS  
INDIAN ELEPHANT  
Name: Ellie

Sex: Female  
Age: 34Y Est.

Acc. #: 101144  
Birth: 14, Feb. 1971

=====

Clinical Note: 20. Dec. 2001  
Curator noticed a fist-sized red structure bulging from dorsal aspect of anus as animal strained to defecate. On examination, reddened erythematous mucosal tissue is exposed from anus, not consistent with a prolapsed rectum, but rather a swollen extremely vascular structure, possibly hemorrhoids. REJ lubricated structure, but animal was not cooperative to allow replacing inside anus. Plan to monitor overnight, reassess in morning. (LRP)

---

Clinical Note: 21. Dec. 2001  
Swellings slightly reduced, tissue appears healthy. To be treated twice daily with DMSO / Mineral oil spray. (REJ)

---

Clinical Note: 24. Dec. 2001  
Swelling significantly smaller, but still has some fibrinous material on the surface. Keepers to continue to spray daily. (REJ)

---

Clinical Note: 28. Dec. 2001  
After introduction hemorrhoids were slightly abraded however size of hemorrhoids is markedly reduced from last week (REM)

---

Clinical Note: 31. Dec. 2001  
Swollen tissue at rectum nearly resolved. Very slight swelling remains, with some superficial abrasions that appear to be healing well. Keepers applying DMSO spray once daily, Preparation H once daily. (REJ)

---

Clinical Note: 11. Jan. 2002  
Results of bloodwork show PCV of 27%, but hemolysis present. Will request repeated sample. (REJ)

---

=====

**ELEPHAS MAXIMUS INDICUS**  
**INDIAN ELEPHANT**  
Name: Ellie

Sex: Female  
Age: 34Y Est.

Acc. #: 101144  
Birth: 14.Feb.1971

=====

**Clinical Note:** 5.Feb.2004  
Repeated bloodwork show hct 31%, RBC 2.5, hgb 11 g/dl, WBC 9,200, 26%  
neuts, 50% lymphs, 10% monos, 13% eos. Evaluation is a normal CBC,  
suggesting that previous bloodwork may have been lab error. (REJ)

---

**Clinical Note:** 11.Feb.2004  
Problem: routine examination  
CC: Routine physical exam  
Obs: Exam done using voluntary behaviors. On left front foot nails 3  
and 5 are cracked with the crack in 3 extending to the cuticle.  
Keepers are cleaning, trimming, and applying coppertox daily.  
Suggested if crack grows out a bit that they try to incise a  
horizontal line across the top to try to keep it from extending back  
to the cuticle. Other three feet look normal. Oral cavity within  
normal limits. Eyes normal.  
A/P: Healthy appearing elephant. Trunk washes scheduled for next  
week. (MW)

---

**Clinical Note:** 17.Feb.2004  
Proc: Annual trunk wash, day 1/3. 60 ml sterile saline infused into  
trunk, held for 10-20 seconds, elephant asked to blow saline into a  
sterile receptacle. (MW)

---

**Clinical Note:** 18.Feb.2004  
Proc: Annual trunk wash, day 2/3. 60 ml sterile saline infused into  
trunk, held for 10-20 seconds, elephant asked to blow saline into a  
sterile receptacle. (MW)

---

**Clinical Note:** 19.Feb.2004  
Annual trunk wash (3/3) was collected using 60 ml of sterile saline  
infused into trunk before elephant blew it back into container to be  
submitted for Mycobacterial culture. (LRP)

---

=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: DONNA

Sex: Female                      Acc. #: 071665  
Age: 34Y 1M Est.              Birth: 29.May.1971

=====

Clinical Note: 5.Apr.2001  
Problem: fractured tooth - right tusk (Confirmed); abscess - left front  
          foot (Confirmed)  
CBC and clinical chemistry are within normal limits. (CJD)

---

Clinical Note: 6.Apr.2001  
Problem: fractured tooth - right tusk (Confirmed); abscess - left front  
          foot (Confirmed)  
Ultrasound examination of solar abscess on left front foot shows  
central plug (1 cm by 1 cm) with a soft tissue echogenicity,  
surrounded by small cavity (1 cm deep, 1 cm wide, on either side of  
this plug) with a fluid echogenicity. All of the sole has a slight  
reduction in echogenicity at this level - possibly a normal but  
reduced tissue density, or a slight acoustic shadow. Keepers to  
continue debriding this area. (CJD)

---

Clinical Note: 16.May.2001  
Problem: fractured tooth - right tusk (Confirmed); abscess - left front  
          foot (Confirmed)  
Abscess much improved, smaller, less tender, less pliable, no further  
treatment. (CJD)

---

Clinical Note: 23.May.2001  
Problem: fractured tooth - right tusk (Confirmed); abscess - left front  
          foot (Confirmed)  
Trunk washes on March 6, 7 and 8 are negative for mycobacterial  
growth. (REM)

---

Clinical Note: 5.Jun.2001  
Problem: fractured tooth - right tusk (Confirmed); abscess - left front  
          foot (Confirmed); tuberculin testing  
Urinalysis pH 8.5, protein (95)

---

Clinical Note: 5.Jun.2001  
Problem: fractured tooth - right tusk (Confirmed); abscess - left front  
          foot (Confirmed); tuberculin testing  
Trunk wash collected for TB culture, day 1 of 3, 6th collection. (REJ)

---



=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: DONNA

Sex: Female                      Acc. #: 071665  
Age: 34Y 1M Est.              Birth: 29.May.1971

=====

Clinical Note:

9.Jan.2002

Problem: fractured tooth - right tusk (Confirmed); abscess - left front foot (Confirmed); nuclear sclerosis - Both eyes (Suspected)  
Annual physical exam done via protective contact through bars in elephant's stall. Elephant is overweight. Both eyes show changes consistent with lenticular sclerosis, with the right eye being more severely affected.

Right tusk (previously broken) shows mild gingivitis around it, but no purulent material; left tusk shows a minor longitudinal crack. Right temporal gland is significantly swollen (12 in. diameter) and has a circular white area in middle; could not palpate. Visual exam of oral cavity and ears is unremarkable.

All four feet show numerous superficial circular erosions. Left forelimb has a longitudinal crack along cranial aspect of 3rd nail. Right forelimb has a deep longitudinal crack in plantar surface of 4th nail and extending cranially. Animal ambulates well. Staff will collect blood, but monthly profiles for entire 2001 year were unremarkable. Weight: 8175 lbs (LRP)

---

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ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: DONNA

Sex: Female                      Acc. #: 071665  
Age: 34Y 1M Est.              Birth: 29.May.1971

---

**Clinical Note:**

10.Dec.2002

Problem: nuclear sclerosis - Both eyes (Suspected)  
UA pH 8.0, protein, glucose, ketones, and bili negative. blood and  
urobili neg, Sp.Gr. 1.005, color light yellow, transp clear (JM)

---

**Clinical Note:**

7.Jan.2003

Problem: nuclear sclerosis - Both eyes (Suspected)  
Annual examination. Normal visual exam, no gait abnormalities. All  
foot pads have superficial erosions but are healthy. the 3rd digit,  
left front has a crack that keepsers continue to trim. Both tush have  
been broken but now grown beyond gingival margin. Good visualization  
of upper molars, normal in appearance. Eyes normal. Blood collected  
for routine bloodwork and vitamin analysis. Weight = 7885#. (REJ)

---

=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: DONNA

Sex: Female                      Acc. #: 071665  
Age: 34Y 1M Est.                Birth: 29.May.1971

=====

Clinical Note:

5.Feb.2004

Problem: nuclear sclerosis - Both eyes (Suspected)  
Results of CBC normal. (REJ)

---

Clinical Note:

10.Feb.2004

Problem: nuclear sclerosis - Both eyes (Suspected); routine examination  
CC: Routine physical exam  
Obs: Exam done using voluntary behaviors. All feet look okay, except  
on LF sole near 3rd toe there is a deep soft spot on the sole. Keeper  
says that site heals and then breaks open again. Discussed  
ultrascounding foot to look for foreign material or a tract.  
Ophthalmic exam - general haziness to lenses bilaterally, density  
present in both lenses that may be cataractous change. Right temporal  
gland enlarged compared to left - chronic change for this animal, does  
not appear to be causing any problems. Distal tail missing (chronic  
injury).  
A/P: Healthy appearing elephant. Trunk washes scheduled for next  
week. (MW)

---

Clinical Note:

13.Feb.2004

Problem: nuclear sclerosis - Both eyes (Suspected)  
Ultrasound exam of left front foot, 3rd toe confirms presence of soft  
sole. On ultrasound exam, there is a 1 cm spherical area immediately  
deep to the sole defect. This area is hyperechoic and dense, and  
deflects the fat pad. Tissue deep to this area appears normal, with no  
evidence of fluid or tract. (REJ)

---

Clinical Note:

17.Feb.2004

Problem: nuclear sclerosis - Both eyes (Suspected)  
Proc: Annual trunk wash, day 1/3. 60 ml sterile saline infused into  
trunk, held for 10-20 seconds, elephant asked to blow saline into a  
sterile receptacle. (MW)

---

Clinical Note:

18.Feb.2004

Problem: nuclear sclerosis - Both eyes (Suspected)  
Proc: Annual trunk wash, day 2/3. 60 ml sterile saline infused into  
trunk, held for 10-20 seconds, elephant asked to blow saline into a  
sterile receptacle. (MW)

---

=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: DONNA

Sex: Female                      Acc. #: 071665  
Age: 34Y 1M Est.                Birth: 29.May.1971

=====

**Clinical Note:**

27.Jan.2005

Problem: nuclear sclerosis - Both eyes (Suspected)

CC: Routine exam

S: Alert, active, in overall good condition

Proc:

1. Restraint: behavioral restraint

2. Physical exam: EENT - oral cavity appears normal, upper teeth in excellent condition, unable to view lower molars. Nuclear sclerosis or central cataracts visible in lenses OU but unable to get close exam. CV/resp appears normal. Cold precluded getting a digital pulse from ear artery. Musculoskeletal within normal limits. Integument - left front foot soaked regularly due to soft spot on sole below 3rd nail, 3rd nail also has a crack on medial aspect that is well trimmed. RF has cracks on nails 3 and 4, well trimmed, foot is soaked twice weekly. Right rear looks good, left rear has cracks on nails 2, 3, and 4 but all are in good condition. Right temporal gland area is swollen which is a chronic change in this animal.

3. Blood collected for CBC/chem panel, banking, vitamin E, and herpes serology.

A: Healthy appearing animal. This animal has always had challenges with its nails. The nails appear very healthy and the elephant team is doing a very good job of managing the cracks in the nails.

P: Pending lab work. (NW)

=====

## **Appendix 6**

### **Donna Medical Records Relevant Pages**

=====

<b>ELEPHAS MAXIMUS</b> (no subsp)	Sex: Female	Acc. #: 071665
<b>INDIAN ELEPHANT</b> (E,I)	Age: 34Y 1M Est.	Birth: 29.May.1971
Name: DONNA		

=====

**Clinical Note:** 25.Jul.2000  
Several small areas on rear of front feet that appear to be dermatomycosis. No treatment at this time, as the animal is now spending more time outside, where the feet are dry and in more sunshine. (REJ)

---

**Clinical Note:** 9.Aug.2000  
Trunk wash sample collected for mycobacterial culture - 1 of 3, second sampling. (REJ)

---

**Clinical Note:** 10.Aug.2000  
Trunk wash sample collected for mycobacterial culture - 2 of 3, second sampling. (REJ)

---

**Clinical Note:** 11.Aug.2000  
Trunk wash sample collected for mycobacterial culture - 3 of 3, second sampling. (REJ)

---

**Clinical Note:** 22.Aug.2000  
Results from 3 trunk washes submitted on June 14, 2000 were all negative at the NVSL. (REM)

---

**Clinical Note:** 31.Oct.2000  
Results of Aug 9, 10, 11 trunk wash negative for mycobacterial organisms (NVSL). (REJ)

---

**Clinical Note:** 1.Nov.2000  
Trunk wash collected for TB analysis. (REM)

---

**Clinical Note:** 2.Nov.2000  
Trunk wash collected for mycobacterial culture, day 2/3, third sampling. (REJ)

---



=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: PEARL

=====

Sex: Female  
Age: 35Y Est.

Acc. #: 073666  
Birth: 1.Jan.1971

Clinical Note:

8.Aug.2002

Problem: prolapsed uterus (Confirmed); fractured tooth - right tusk  
(Confirmed); lameness - front left quarter (Confirmed)  
ZM reports stiff left front leg for 48 hours. Elephant will present  
sole and foot, so flexion is possible but resisted. No lesions on foot  
or nails notable, appetite and activity normal. To begin on analgesics  
and monitor.

Rx: PHENYLBUTAZONE 8.02 gm PO q48h for 3 doses. (REJ)

Purpose: prolapsed uterus (Confirmed)  
fractured tooth - right tusk (Confirmed)  
lameness - front left quarter (Confirmed)

Prescription Data >>

Starting date: 8.Aug.2002

Drug: PHENYLBUTAZONE 8.02 gm PO q48h for 3 doses

Formulation: 1000.0 mg tablet

Prescribed by: REJ (8.Aug.2002)

Filled by: REJ (8.Aug.2002)

Drug dosage: 2.50 mg/kg

Treatment weight: 3208 kg

Clinical Note:

4.Sep.2002

Problem: prolapsed uterus (Confirmed); lameness - front left quarter  
(Confirmed)  
Results of chem profile within normal limits. (REJ)

Clinical Note:

5.Sep.2002

Problem: prolapsed uterus (Confirmed); lameness - front left quarter  
(Confirmed)  
CBC is unremarkable. (LRP)

=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: PEARL

Sex: Female  
Age: 35Y Est.

Acc. #: 073666  
Birth: 1.Jan.1971

=====

**Clinical Note:**

17.Dec.2002

Problem: prolapsed uterus (Confirmed)  
Urinalysis - Ph=8.5, protein trace, glucose, ketone, bili neg; color yellow, SG 1.007, a few blood cells and bacteria present. (REU)

---

**Clinical Note:**

10.Jan.2003

Problem: prolapsed uterus (Confirmed)  
Annual PE, normal with following notations: upper molars are malaligned, the anterior ends of both are growing medially, however, does not appear to be affecting mastication at this time, lateral digit on left front foot has hoof crack and earlier this week, a cuticle abscess that erupted, seems quiescent now, both rear feet have soft soles and hooves due to chronic urine dribbling from incontinence due to perineal hernia, soft, almost gelatinous tissue noted in interdigital space, does not go deeply when trimmed with hoof knife, perineal hernia has no change in size. (REM)

---

---

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: PEARL

Sex: Female  
Age: 35Y Est.

Acc. #: 073666  
Birth: 1.Jan.1971

---

**Clinical Note:**

5.Jan.2004

Problem: prolapsed uterus (Confirmed)  
CBC differential reviewed by Antech pathologist (Acc #CHAC10102640)  
shows 27% neutrophils, 31% lymphocytes, 36% monocytes, 5% eosinophils,  
and 1 % basophils. (EKT)

---

**Clinical Note:**

5.Jan.2004

Problem: prolapsed uterus (Confirmed)  
Continued discharge of flocculent material in urine, animal appears  
depressed today. Request repeat CBC and urine for UA and culture. To  
begin on course of antibiotics.  
Rx: UNIPRIM 240 gm PO SID for 5 days. (REJ)

---

**Purpose:** prolapsed uterus (Confirmed)  
lameness - front left quarter (Confirmed)

**Prescription Data >>**

Starting date: 5.Jan.2004

Drug: UNIPRIM 96.24 gm PO SID for 5 days  
Formulation: 400.0 mg/gm powder  
Prescribed by: REJ (5.Jan.2004)  
Drug dosage: 30.00 mg/kg  
UNIPRIM = TRIMETHOPRIM + SULFADIAZINE

Filled by: REJ (5.Jan.2004)  
Treatment weight: 3208 kg

---

=====

ELEPHAS MAXIMUS (no subsp)  
INDIAN ELEPHANT (E,I)  
Name: PEARL

=====

Sex: Female  
Age: 35Y Est.

Acc. #: 073666  
Birth: 1.Jan.1971

Clinical Note:

3.Feb.2005

Problem: prolapsed uterus (Confirmed)  
Annual trunk wash, day 3/3. 60ml sterile saline infused into trunk,  
held for 10 seconds while keeper moved trunk up and down, elephant  
asked to blow saline into a sterile receptacle. Samples to be sent  
out as a batch from all 3 days for mycobacterial culture. (EKT)

---

Clinical Note:

11.Feb.2005

Problem: prolapsed uterus (Confirmed)  
Ultrasound examination of rear feet. Left foot - a 3-5 cm fluid pocket  
is present 3 cm deep from the pad under the area of a superficial sole  
deficit. The elephant is not lame on this leg, and it is suspected  
that the pocket is a seroma. Right foot - no underlying or  
undermining lesions are noted on this foot. (REJ)

---

**CITIZEN PETITION BEFORE THE  
UNITED STATES DEPARTMENT OF AGRICULTURE**

**IN DEFENSE OF ANIMALS**

131 Camino Alto, Suite E,  
Mill Valley, California 94941

v.

**MIKE JOHANNNS**

Secretary of Agriculture  
U.S. Department of Agriculture  
1400 Independence Ave., S.W.  
Room 200A  
Whitten Building  
Washington, DC 20250

Docket No. \_\_\_\_\_

**DR. CHESTER GIPSON**

Deputy Administrator  
Animal Care  
U.S. Department of Agriculture  
4700 River Rd  
Unit 84  
Riverdale, MD 20737-1234

**PETITION SEEKING AN INTERPRETIVE RULE AND ENFORCEMENT  
UNDER THE ANIMAL WELFARE ACT TO ELIMINATE VIOLATIONS OF  
THE SPACE AND CONDITIONS REGULATIONS FOR ELEPHANTS AT ZOOS**

Pursuant to the Right to Petition Government Clause contained in the First Amendment of the United States Constitution,<sup>1</sup> the Administrative Procedure Act,<sup>2</sup> and

<sup>1</sup> "Congress shall make no law ... abridging ... the right of the people ... to petition Government for a redress of grievances." U.S. Const., amend. I. The right to petition for redress of grievances is among the most precious of the liberties safeguarded by the Bill of Rights. United Mine Workers of America, Dist. 12 v. Illinois State Bar Ass'n, 389 U.S. 217, 222 (1967). It shares the "preferred place" accorded in our system of government to the First Amendment freedoms, and has sanctity and a sanction not permitting dubious intrusions. Thomas v. Collins, 323 U.S. 516, 530 (1945). "Any attempt to restrict those First Amendment liberties must be justified by clear public interest, threatened not doubtful or remotely, but by clear and present danger." Id. The Supreme Court has recognized that the right to

exhibitor enlarge the space and improve the conditions or move the elephants to a better environment, such as a sanctuary; and

- (e) The agency will consider exhibitors to be in violation of the adequate care, space and conditions regulations when elephants develop chronic foot problems, and the symptoms of those problems are treated (through the use of antibiotics, anti-inflammatory and pain-killing drugs) without addressing the cause (inadequate space and conditions).
- (2) USDA should immediately inspect all elephant exhibitors beginning with the zoos discussed in this petition that currently have elephants suffering from chronic foot and joint problems and confiscate elephants in poor condition.<sup>6</sup> These zoos include: National Zoo, Lee Richardson Zoo, Abilene Zoo, Reid Park Zoo, Los Angeles Zoo, and Cameron Park Zoo.

### **PETITIONER**

Petitioner, In Defense of Animals, (IDA) is a nonprofit international animal protection organization dedicated to ending the exploitation and abuse of animals by defending and advocating for their rights, welfare and habitat. IDA's efforts include educational events, cruelty investigations, boycotts, grassroots activism, and hands-on rescue through its sanctuaries in Mississippi and Cameroon, Africa.

### **STATEMENT OF FACTS**

Elephants, like humans, live in multi-faceted societies. They are highly intelligent, possess complex emotions, exceptional memory and live unusually long lives. They can remember other individuals after more than a decade of separation, and are capable of emotions such as joy, anger, grief, sympathy, playfulness, and revenge. Numerous scientific observations suggest that: (1) Elephants recognize their own image in a mirror indicating that elephants are self-aware; (2) Elephants have the capacity for both empathy and anticipatory planning, including the possibility of imagining future

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<sup>6</sup> Petitioner recommends that USDA thoroughly examine the feet of all exhibited elephants regularly and confiscate elephants in poor condition. 9 C.F.R. § 2.129.

miles]. Elephants travel 8 to 20 kilometres [5-12 miles] a day, frequently walking further in areas of lower resource availability, or when a male is searching for females. Figures for Asian elephants are similar with home ranges averaging 350 km<sup>2</sup> [270 square miles] for males and 100 to 115km<sup>2</sup> [62-71 square miles] for females and daily movements ranging between 8 to 22 km [5-14 miles].<sup>11</sup>

Clearly, the 400 square feet recommended by the AZA is a much smaller space requirement than the 120 square miles used by elephants under natural conditions. Thus, USDA enforcement actions, as requested herein, should not overlook exhibitors following the AZA industry standards. Even facilities that meet the AZA standards may have elephants that are in poor health, due to the limited amount of space provided, resulting in the exhibitor not being in compliance with the AWA.

Many of the health problems elephants have in zoos involve chronic foot and joint damage. This problem is widespread among zoo elephants and has become the number one cause of suffering and premature death for elephants at zoos.<sup>12</sup> More than 50 percent of captive elephants develop foot-related problems.<sup>13</sup>

Experts agree that the reasons elephants at zoos are suffering from foot and joint problems are directly attributable to their inadequate space and living conditions. For example, most elephants at zoos live on hard concrete surfaces and compacted soil, stand for long hours in their own waste, and are confined in small spaces for long periods of time prohibiting sufficient exercise.<sup>14</sup> Due to the inadequate amount of space and

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<sup>11</sup> Poole Dec. ¶ 15.

<sup>12</sup> See Schmidt Decl. ¶ 2.

<sup>13</sup> Gary West, Occurrence and Treatment of Nail/Foot Abscesses, Nail Cracks, and Sole Abscesses in Captive Elephants, in The Elephant's Foot: Prevention and Care of Foot Conditions in Captive Asian and African Elephants 93 (Blair Csuti, et al., eds., 2001) [hereinafter "West, The Elephant's Foot"].

<sup>14</sup> See e.g. Schobert Decl. ¶¶ 8-9; Schmidt Decl. ¶¶ 6-7,12; Alan Roocroft and James Oosterhuis, Foot Care for Captive Elephants, in The Elephant's Foot: Prevention and Care of Foot Conditions in Captive Asian and African Elephants 22 (Blair Csuti, et al., eds., 2001) [hereinafter "Roocroft and Oosterhuis, The Elephant's Foot"].

certainly didn't evolve to stand motionless for long periods of time" yet this is precisely how many elephants in zoos spend their days.<sup>18</sup>

An example demonstrating the correlation between inhumane and inadequate space and living conditions for zoo elephants and the development of chronic foot and joint problems occurred at the San Francisco Zoo. At this zoo, all four elephants suffered for many years from chronic foot problems and lameness. After the death of two of the elephants, (Maybelle, who died after collapsing and suffering for over twenty years with chronic lameness and foot problems and Calle, who was euthanized after suffering for almost ten years of chronic foot problems and lameness), the zoo was forced to review the living conditions for its elephants.<sup>19</sup> It was clearly evident that the zoo's facilities contributed to the elephants' chronic foot and joint problems and the zoo was forced to admit that its facilities were outdated and the elephants needed to live in a better environment.<sup>20</sup>

After the two deaths, the zoo decided to transfer its two remaining elephants, Lulu and Tinkerbelle, in November 2004 to the Performing Animal Welfare Society's (PAWS) sanctuary in San Andreas, CA. Unfortunately, this move came too late. In March of 2005, Tinkerbelle was euthanized due to complications with her feet and degenerative joint disease.<sup>21</sup> Although the San Francisco Zoo transferred its remaining elephants to a place where the elephants' health could recover, it acted too late to save three of its four

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<sup>18</sup> Roocroft and Oosterhuis, *The Elephant's Foot*, *supra* note 14 at 37.

<sup>19</sup> See In Defense of Animals, *Save Zoo Elephants: Elephant Bios*, at [http://www.saveszooelephants.com/maybelle\\_bio.html](http://www.saveszooelephants.com/maybelle_bio.html) and [http://www.saveszooelephants.com/calle\\_bio.html](http://www.saveszooelephants.com/calle_bio.html) (last visited May 18, 2005).

<sup>20</sup> See *San Francisco Zoo Decides to Relocate Elephants Because of Poor Facilities*, Associated Press, (May 6, 2004), available at [http://www.elephants.com/news/globalnews.php?newsSubCategory\\_id=3#17](http://www.elephants.com/news/globalnews.php?newsSubCategory_id=3#17). [hereinafter "Relocate Elephants"].

<sup>21</sup> See Press Release, San Francisco Zoo, *Asian Elephant Tinkerbelle Is Euthanized* (March 25, 2005), available at <http://www.sfzoo.org/generated/pressReleases/285Tinkerbelle.pdf> [hereinafter Tinkerbelle Euthanized].

The San Francisco Zoo and the Detroit Zoo are among the zoos that have chosen to address inadequate space and conditions issues by retiring their elephants at sanctuaries. PAWS in California is one sanctuary where elephants are being retired and another is the Elephant Sanctuary in Tennessee. At these sanctuaries, elephants who struggled with foot diseases for numerous years are recovering. Carol Buckley, a co-founder of the Elephant Sanctuary, has seen first hand how elephants that come to the sanctuary with severe foot problems “recover due to the vast amount of space that they have access to as well as improved living conditions which reflect a more natural environment, much like what they would experience in the wild.”<sup>29</sup>

Although sanctuaries are saving the lives of many elephants with foot infections, most zoos are not choosing this option. Unlike the Detroit Zoo, many zoos are not preventing and eliminating the unnatural conditions that cause problems to elephants’ feet and joints (such as getting them off concrete floors) and instead are trying to treat the problem by using pain-relieving medication, antibiotics, anti-inflammatories and medical interventions such as repeatedly trimming the rotting flesh of infected elephant feet.<sup>30</sup> These interventions do nothing to eliminate the underlying cause of the elephants’ physical conditions and do not exempt zoos from providing humane living conditions.

In order to protect the health of captive elephants, USDA needs to enforce the AWA. The medical records from many zoos show that these zoos are violating USDA’s regulations because their elephants are suffering from chronic foot and joint disease that is linked to the inadequate amount of space and conditions provided for their elephants. Because foot and joint problems are the number one physical problem with elephants at

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<sup>29</sup> Buckley Decl. ¶ 8.

<sup>30</sup> See Schmidt Decl. ¶ 13.

## ARGUMENT

### I. USDA'S REGULATIONS REQUIRE THAT ENCLOSURES FOR EXHIBITED ANIMALS PROVIDE SUFFICIENT SPACE AND ADEQUATE CONDITIONS FOR THE ANIMALS.

USDA's regulations specifically identify adequate space and conditions as an animal welfare requirement that must be met by exhibitors such as zoos. These regulations explain that the amount of space and type of conditions must be adequate for the well-being of the animal.

The space requirement under 9 C.F.R. § 3.128 states the following:

Enclosures shall be constructed and maintained so as to provide sufficient space to allow each animal to make normal postural and social adjustments with adequate freedom of movement. Inadequate space may be indicated by evidence of malnutrition, poor condition, debility, stress, or abnormal behavior patterns.

This regulation requires exhibitors to provide sufficient enclosure space for the animal by giving the animal adequate freedom of movement. USDA has interpreted the term "adequate freedom of movement" to include the ability to exercise.<sup>33</sup> The agency looks at "what is normal for that species under natural conditions."<sup>34</sup> In addition, the space requirement in 9 C.F.R. § 3.128 specifies that inadequate space is evidenced by the animal's poor health.<sup>35</sup> Thus, in order to determine whether a zoo is providing adequate space for an animal, such as an elephant, USDA looks at whether the enclosure is large enough to allow the elephant to exercise similarly to how the animal would move in the wild and USDA assesses the physical condition of the elephant at the zoo. If an elephant

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<sup>33</sup> See Space and Exercise Requirements for Traveling Exhibitors, Animal Care Resource Guide, Policy #6 (Oct. 13, 1998).

<sup>34</sup> See Adequate Enclosures for Flying Species and Aquatic Species, Animal Care Resource Guide, Policy #24 (Oct. 13, 1998).

<sup>35</sup> 9 C.F.R. § 3.128.

## II. ELEPHANTS IN ZOOS ARE SUFFERING FROM CHRONIC FOOT AND JOINT PROBLEMS CAUSED BY INADEQUATE SPACE AND LIVING CONDITIONS

Elephants at many zoos are standing on hard concrete flooring, in their own waste for 16 hours or more, and in small confined spaces for long periods of time, especially during the winter at northern zoos, without sufficient exercise. Experts agree that these factors are causing chronic foot and joint disease in elephants that can lead to death. This correlation between foot and joint disease in elephants and inadequate enclosure space and living conditions is visible and prevalent at zoos across the country.

### (a) Expert Opinion Explaining the Correlation Between Foot and Joint Disease in Exhibited Elephants and Inadequate Space and Living Conditions at Zoos.

Experts agree that chronic foot disease and arthritis are the major causes of suffering and premature death for zoo elephants.<sup>38</sup> Elephant experts have identified hard flooring, unclean living conditions, and inadequate space as the primary causes of these physical problems.<sup>39</sup> To protect the health and well being of elephants, most zoos need to take immediate action by either alleviating or preventing foot and joint disease through improving the elephant's space and living conditions or moving the elephants to sanctuaries where their needs can be met.<sup>40</sup>

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<sup>38</sup> See Schmidt Decl. ¶¶ 2, 12; Fowler, *The Elephant's Foot*, *supra* note 15 at 3, 5-6 (stating that "[f]oot problems constitute the single most important ailment of captive elephants. More caretaker time is spent caring for feet than on any other task, except feeding and cleaning").

<sup>39</sup> Katharina M. Hittmair, et al., *Radiographic Diagnosis of Lameness in African Elephants (*Loxodonta Africana*)*, 41 *Vet Radiol. & Ultrasound* 511-15 (Nov./Dec. 2000)[hereinafter "Radiographic Diagnosis"]

<sup>40</sup> Foot problems in older elephants pose serious risks. Elephant experts explain that "[o]steomyelitis in the bones of the feet of older elephants has been a significant cause of mortality in the over 40-year age group. The best method of treating osteomyelitis is to take preventive measures to keep the infection from occurring in the first place." Laurie J. Gage, David Blasko, and the Elephant Staff from Six Flags Marine World, Address at the U.C. Davis Workshop, *Elephants: Behavioral, Ecological, and Cultural Perspectives* (October 28, 2000) (abstract available at <http://www.vetmed.ucdavis.edu/CCAB/abstra-1.htm>) [hereinafter UC Davis Workshop].

wear too thin, harming the underlying tissue, which can then lead to abscesses of the foot.<sup>46</sup>

Elephant expert Dr. Schmidt explains that due to the daily abuse from standing on hard flooring, “the elephants’ feet become chronically infected by bacteria and fungi. My experience has shown me that concrete flooring injures and kills elephants.”<sup>47</sup> He further explains that:

. . . over time, the daily accumulation of damage from standing and walking on flat concrete floors tends to cause joint injury and predisposes the elephant’s feet to infection from abnormal wear. As the joints and feet become progressively injured by life spent on a concrete floor, the pain the elephant feels makes it reluctant to move around as much on its sore legs and feet. This creates a vicious circle and downward spiral of pain, followed by less movement, causing further injury, causing more pain, causing even less movement, etc. It is a continuous, gradual process that does its damage bit-by bit and this damage continues hourly, daily, weekly, monthly and through the long decades of an elephant’s life in the zoo.<sup>48</sup>

Elephant experts repeatedly point out that natural substrates should be used to prevent and alleviate foot and or joint problems because this type of substrate allows an elephant to dig and “exercise and strengthen leg and foot muscles, tendons, and joints. This exercise and activity directly supports healthy feet throughout the elephant’s life.”<sup>49</sup> This information from elephant experts shows that rather than housing elephants on hard concrete flooring, elephants should live on softer, more natural and resilient yielding surfaces.<sup>50</sup> This change in the elephant’s living conditions will help to prevent and alleviate the elephant’s foot and joint problems.

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<sup>46</sup> See Roocroft and Oosterhuis, *The Elephant’s Foot*, supra note 14 at 39.

<sup>47</sup> Schmidt Decl. ¶ 6 (emphasis added).

<sup>48</sup> Id.

<sup>49</sup> Roocroft and Oosterhuis, *The Elephant’s Foot*, supra note 14 at 22, 45 (listing actions to prevent abscesses, including “allowing the elephant to live on soft, yielding surfaces”).

<sup>50</sup> UC Davis Workshop, supra note 40.

exercise seem to have fewer foot problems than elephants that primarily stand throughout the day.”<sup>56</sup>

Despite the physical needs of elephants, requiring sufficient space to exercise for the health of their feet, the AZA only requires that its members give an elephant a minimum of 400 square feet of indoor space and at least 1,800 square feet of outdoor space.<sup>57</sup> This amount of space is highly criticized by many elephant experts. One former zoo curator explains that the “AZA standards for elephant enclosures are far from adequate. These standards are comparable to putting a 100 pound Labrador dog into a 5 feet by 6 feet bathroom for its entire life.”<sup>58</sup> The Royal Society for the Prevention of Cruelty to Animals issued a study identifying the animal welfare problems at zoos in Europe and explained that even the minimum AZA and the European AZA standards for elephant enclosures are “60 to 100 times smaller than the smallest wild territories.”<sup>59</sup> Elephants at AZA accredited zoos are known to be suffering physical problems due to the inadequate amount of space in their enclosures, clearly indicating that the AZA standards are not benefiting, but rather harming the health of exhibited elephants.<sup>60</sup>

The AZA and some other members of the zoo community argue that there is no scientific evidence that elephants require ample space and suggest that elephants only

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<sup>56</sup> UC Davis Workshop, *supra* note 40.

<sup>57</sup> See *Guide to Accreditation of Zoological Parks and Aquariums*, American Zoo and Aquarium Association, 54 (2005), available at <http://www.aza.org/Accreditation/Documents/AccredGuide.pdf> (last visited May 1, 2005).

<sup>58</sup> Schobert Decl. ¶ 13.

<sup>59</sup> RSPCA, *Live Hard, Die Young: How Elephants Suffer in Zoos*, 4-5, available at <http://www.rspca.org.uk/servlet/Satellite?pagename=RSPCACampaigns/Elephants/FactsAndReports&articleid=1024473728261> (last visited May 18, 2005) [hereinafter RSPCA Study].

<sup>60</sup> See Schobert Decl. ¶ 13. In addition to foot problems, elephants in small enclosures at zoos also may exhibit stereotypic behavior such as head bobbing, perpetual swaying, male masturbation, pulling on teeth, and sticking trunk in between tusk. *Id.* ¶ 11.

adequate.<sup>67</sup> Elephant expert Dr. Schmidt explains that while “such space may be adequate for a couple of domesticated horses or cows, it is far below the necessary space required to meet the biological and behavioral needs of these largest of the living land animals.”<sup>68</sup> Furthermore, it is important to note that even if a zoo provides a significant amount of outside space, if it is located in a cold and wet northern climate, then the elephant will spend several months confined indoors. By warehousing elephants for the winter, zoos severely limit the amount of space elephants have to move. Many experts conclude that the problems with elephants’ feet and joints will not be alleviated in northern zoos because of the inability for a northern zoo to provide the elephant with adequate space to exercise.<sup>69</sup> It is precisely this reason why the elephants from the Detroit Zoo were moved to a sanctuary.<sup>70</sup>

Elephant experts consistently agree that elephants in many zoos have an inadequate amount of space for sufficient exercise. For example, elephant expert Dr. Schmidt polled a dozen experienced elephant keepers at a seminar and “only two thought that their elephants had enough space.”<sup>71</sup> Furthermore, in a survey conducted of elephant experts, only 32 percent of the participants said that their elephants receive more than 30 minutes of exercise a day.<sup>72</sup> Over half of the participants thought that there was a

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<sup>67</sup> See Schmidt Decl. ¶ 4.

<sup>68</sup> Id.

<sup>69</sup> See Schobert Decl. ¶ 12. See also RSPCA Study, supra note 59 at 10 (explaining that elephants “must be able to have a good quality of life whatever the weather” and the RSPCA recommends that the indoor space requirements should be at least equivalent to the AZA/EAZA minimum requirements for outdoor space).

<sup>70</sup> See Hugh McDiarmid Jr., Detroit Zoo to Free Elephants: Animals Going to a Refuge, Detroit Free Press, (May 20, 2004), available at [http://www.freep.com/news/metro/zoo20\\_20040520.htm](http://www.freep.com/news/metro/zoo20_20040520.htm)

<sup>71</sup> Schmidt Decl. ¶ 3.

<sup>72</sup> See Dimeo-Ediger, The Elephant’s Foot, supra note 43 at 153.

(b) **Examples of Zoos Where Elephants Have or Currently Are Suffering from Chronic Foot and Joint Problems Due to Inadequate Space and Conditions**

Several zoos have voluntarily decided to transfer their elephants to sanctuaries after determining that their facilities were inadequate to provide their elephants with sufficient care. Other zoos have not taken this step and are currently exhibiting elephants even though their inadequate facilities are causing their elephants to suffer from chronic foot and joint problems.

In over 20 years, at least 38 exhibited elephants have died due to chronic foot and/or joint problems.<sup>78</sup> Because foot and joint problems are wide-spread among exhibited elephants, it is imperative that zoos and USDA act to prevent further elephant deaths. Petitioners request that USDA rigorously inspect zoos by examining elephants' feet, medical records, and living conditions. By reviewing all of these factors, petitioners believe that USDA will find that the health of elephants is declining as a result of the inadequate living conditions provided at exhibitor facilities. Based on this information, USDA must act in accordance with its own regulations by requiring that exhibitors either improve living conditions to meet elephants' needs or transfer elephants to another environment that can meet their needs, such as a sanctuary.

1. **Examples of zoos that have transferred their elephants to sanctuaries after recognizing that the zoo did not have adequate facilities to properly care for the elephants**

**San Francisco Zoo**

At the San Francisco Zoo, all four elephants, Maybelle, Calle, Tinkerbelle, and Lulu, suffered from foot and joint problems for many years. After the death of two elephants, Maybelle and Calle, the zoo was forced, through strong public pressure, to

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<sup>78</sup> See Chart *infra* pp 34-35.

for Maybelle (African enclosure) and 17,000 square feet for Calle (Asian enclosure) is extremely small, given that elephants in the wild walk up to 100 kilometers (over 62 miles) in a day.<sup>84</sup>

The regulations further state that animals shall only be exhibited under conditions consistent with their good health and well being.<sup>85</sup> At the San Francisco Zoo, the elephants were kept on hard surfaces far different from the soft substrate on which elephants walk in the wild. The medical records show that for at least 20 years, the San Francisco Zoo ignored these AWA regulatory requirements and did nothing to significantly alter the living conditions for Maybelle or any of the other elephants who suffered from similar foot and lameness problems.

Rather than changing the living conditions for these animals by giving them more space to exercise and getting them off the hard substrate, the zoo repeatedly gave the elephants painkillers. Maybelle, for example, was given pain-relieving medication repeatedly for at least four years and Calle was given pain-relieving drugs for at least five years. This type of treatment was not successful because it did not improve the condition of their feet. Instead, the condition of their feet continued to deteriorate. The zoo staff even admitted in assessing Maybelle's condition that there was no significant improvement in her mobility since being on the pain killers.<sup>86</sup> The ongoing physical problems combined with the unnatural living conditions (small enclosure and hard substrate) should have alerted the staff that the elephants' poor health was connected to their inadequate living conditions.

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<sup>84</sup> See Sheldrick Decl. ¶ 4

<sup>85</sup> 9 C.F.R. § 2.131(c)(1).

<sup>86</sup> San Francisco Zoo, Maybelle's medical records, April 1, 2003, Exhibit 2a.

accordance with the AWA regulations by removing the elephants from their inadequate living conditions before their health had completely deteriorated.

### Detroit Zoo

Unlike the San Francisco Zoo, the Director of the Detroit Zoo moved its two elephants, Wanda and Winky, to a sanctuary before ill health due to inadequate living conditions killed them. Detroit Zoo Director Ron Kagan retired the elephants to the warm-weather PAWS sanctuary.<sup>92</sup> Wanda had developed chronic arthritis and Winky was combating chronic foot problems.<sup>93</sup> Kagan found that the elephants could not be cared for properly in the zoo's one-acre elephant exhibit, particularly during the winter when they were confined in small stalls. Kagan concluded that, without normal movement, the elephants' foot and joint disease would become life-threatening.

He explained: "[n]ow we understand how much more is needed to be able to meet all the physical and psychological needs of elephants in captivity, especially in a cold climate."<sup>94</sup> Kagan explained further that the zoo would need to provide "up to 20 acres of land to provide an adequate environment" for these elephants.<sup>95</sup> The amount of space needed to adequately exhibit the elephants is far greater than the one-acre enclosure in which Wanda and Winky resided at the Detroit Zoo.<sup>96</sup>

The Detroit Zoo is an example of a zoo acting in accordance with the AWA space and conditions regulations.<sup>97</sup> Here, the zoo director did not ignore the causes of the elephants' foot and joint problems. He recognized that the health of the elephants was

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<sup>92</sup> Kaufman, *supra* note 23.

<sup>93</sup> HSUS, *supra* note 22.

<sup>94</sup> Hugh McDiarmid, Jr., Detroit Zoo to Free Elephants: Animals going to a refuse," (May 20, 04), available at, [http://circuswatchwa.org/news/detroit\\_zoo\\_frees\\_elephants.htm](http://circuswatchwa.org/news/detroit_zoo_frees_elephants.htm)

<sup>95</sup> *Id.*

<sup>96</sup> *See id.*

<sup>97</sup> 9 C.F.R. §§ 3.128, 2.131(c)(1), 2.131(e).

standing and developed pressure sores from leaning at night to take the pressure off her feet.<sup>100</sup> In the last months of her life, she was reported to be holding her right foot off the ground and leaning her head against the bars of her indoor stall.<sup>101</sup>

A January 26, 2000 entry in Nancy's medical records reads, "Reported for lameness left front, stiffness right front . . . All the elephants have been housed indoors continuously for the past few days due to the extreme cold weather. The floors are extremely hard (cement) and this may have exacerbated her lameness. . . . A: Lameness, forelimb R/O digital osteomyelitis, hard substrate. . . . Consider recommending application of permanent soft flooring for this geriatric elephant."<sup>102</sup>

Zoo staff treated Nancy's foot infections with extreme measures, among them frequent intravenous infusions of antibiotics through veins in her feet and stuffing antibiotic "bullets" into the abscessed cracks of her feet by plugging them with "tampons."<sup>103</sup> The records do not indicate that the staff ever dealt with the cause of her problems. Soft flooring does not appear to have been brought in and no attempt was made to relocate this elephant from these inadequate conditions.

On June 26, 2000, National Zoo veterinarians noted that Nancy had an infected "sole defect" on her right foot that was 10 centimeters long and 5-8 centimeters wide.<sup>104</sup> A month later, the records state that Nancy's right foot was "swollen and painful," noting infection and "breakdown of tissue."<sup>105</sup> This elephants' condition continued to decline. She was euthanized on August 22, 2000.<sup>106</sup>

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<sup>100</sup> National Zoo, Nancy's medical records, Exhibit 8b.

<sup>101</sup> National Zoo, Nancy's medical records, August 19, 2000, Exhibit 8c.

<sup>102</sup> National Zoo, Nancy's medical records, January 26, 2000, Exhibit 8d (Emphasis added).

<sup>103</sup> National Zoo, Nancy's medical records, Exhibit 8e.

<sup>104</sup> National Zoo, Nancy's medical records, Exhibit 8f.

<sup>105</sup> National Zoo, Nancy's medical records, July 24, 2000, Exhibit 8g.

<sup>106</sup> National Zoo, Nancy's medical records, August 22, 2000, Exhibit 8a

When I saw Toni on January 4<sup>th</sup>, 2006, I was appalled. I have never seen an elephant in such a debilitated condition. Toni is an elephant at least 2,000 pounds underweight with an almost contorted posture. She moved carefully, placing each foot with deliberation and consideration as to its position. She tried not to put much weight on each step, as if walking on eggs. All the while she was leaning back onto her rear quarters, obviously keeping weight off of her front legs. Her spine looked curved and her pelvis was twisted. The fact that I could see her spine, shoulder blades, and hip bones was beyond belief. I had expected her to be in poor shape, but this was more than I could have ever imagined.<sup>114</sup>

Dr. Richardson disagrees with the zoos attempt to blame Toni's condition on a leg injury she suffered 20 years ago at another zoo. He states:

Elephants in the wild have sustained fractured legs and even ankylosed carpal joints, like Toni. They have been seen to recuperate and go on to live almost normal elephant lives, albeit with a limp. Had Toni had access to an adequate environment with enough space to roam and a natural substrate, I am certain that she could have better dealt with her injury and would not be in such a condition as today. Toni's exhibit only allowed for exacerbation of her injury. Lack of exercise caused muscle atrophy, removing the muscular support needed to sustain healthy joints and standing on concrete increased the trauma to joint surfaces initiating degenerative joint disease while walking on sand literally rubbed down her pads, thinning her soles and increasing her pain . . .<sup>115</sup>

Dr. Richardson explains further that veterinarians are trained to prevent pain and suffering, not just treat it.<sup>116</sup> The veterinarians at the National Zoo cannot prevent the painful degenerative arthritis because "the cause of the crippling degenerative joint disease is the exhibit itself: the concrete; the packed unyielding abrasive substrate inside and outside; the lack of exercise and normal use of the elephants feet and limbs – climbing, digging, walking, wading into streams, kicking logs, and foraging . . ."<sup>117</sup>

Dr. Joyce Poole of the Amboseli Elephant Research Project in Kenya agrees with Dr. Richardson's assessment. She explains:

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<sup>114</sup> Richardson Decl. ¶ 5.

<sup>115</sup> Id. ¶ 9.

<sup>116</sup> Id. ¶ 14.

<sup>117</sup> Id.

causes.<sup>120</sup> For instance, the staff identified that the pads on the elephants' feet had "deteriorated from being on wet cement so much of the time."<sup>121</sup>

The elephants at this zoo have had ongoing foot and lameness problems for at least 12 years and the staff has suspected their living conditions as a cause of the problem, however, the medical records show that the zoo has not acted in accordance with AWA regulations by removing the elephants from the inadequate living conditions. Given this information, USDA should immediately inspect the elephants' feet, medical records, and living conditions. Based upon this information, USDA must require this zoo to either significantly improve the conditions under which it confines elephants, or relocate them to a sanctuary where their needs can be met.

The Abilene Zoo has two African elephants, Tanzy and Tanya, with foot problems. The elephants are housed in extremely small enclosures that consist of a 360 and a 324 square foot stalls.<sup>122</sup> As with the Lee Richardson Zoo, the staff at this zoo highlights the inadequate living conditions. The medical records for Tanya state that the elephant's feet reveal "definite signs of standing in excess water for extended periods of time."<sup>123</sup>

On an inspection of the zoo in November 2004, the American Zoo and Aquarium Association noted that the floors of the barn were not sloped enough to allow urine and water to run off the floor "forcing the elephants to stand in moisture during the time they are in the barn."<sup>124</sup> To prevent these elephants from continuing to suffer from foot

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<sup>120</sup> Id., June 2, 2001, Exhibit 3b (citing "Feet in poor condition. Suspect wet yards").

<sup>121</sup> Id., Feb. 7, 2004, Exhibit 3c; See also Id., Dec. 6, 2001, Exhibit 3d (describing Chana's feet as "chronic infections in feet due to substrate issues and long term foot problems.").

<sup>122</sup> Abilene Zoo, Tanzy and Tanya's medical records, Exhibit 4a. Note that the enclosures at this facility are smaller than the AZA enclosure standards for elephants.

<sup>123</sup> Id., July 6, 2004, Exhibit 4b.

<sup>124</sup> Id. AZA observation notes, Exhibit 4c.

general curator at this zoo believes that Gita continues to suffer from foot problems because “for many years she was confined in a small enclosure and lived on hard concrete flooring”<sup>130</sup> and continues to live in conditions that do not meet her needs. Specifically, Gita lives in a very small enclosure. She shares approximately 6,000 square feet with another elephant and stands on hard concrete flooring and hard compacted soil.<sup>131</sup> Because Gita’s condition has been ongoing for at least 27 years, the USDA must inspect this zoo by examining Gita’s feet, reviewing the medical records, and assessing her living conditions. Clearly, the changes this zoo made have not been sufficient to improve Gita’s condition. USDA needs to act in accordance with its adequate space and conditions regulations by requiring this zoo to make more significant improvements to Gita’s living condition or move her to a sanctuary environment that will benefit her health.

The *Cameron Park Zoo’s* African elephants, Tembo and Zoe, both suffer from recurring foot and lameness problems. These problems have been ongoing since at least 1998 for Tembo and 1999 for Zoe. The zoo staff recognizes that the major causes of foot problems include, inadequate exercise and wear on the feet, hard substrates, obesity, and wet and/or dirty conditions.<sup>132</sup> Although the staff understands the causes of foot problems, it is not evident that any changes have been made in their living conditions. Therefore, USDA should inspect this zoo’s living conditions and the condition of the elephants’ feet and then recommend changes in the living conditions by either

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<sup>130</sup> *Id.* ¶ 6.

<sup>131</sup> Telephone conversation with elephant expert Les Schobert (June 16, 2005)(explaining that Gita’s condition continues to deteriorate because her living conditions do not meet her needs).

<sup>132</sup> Cameron Park Zoo, Tembo and Zoe’s medical records, Exhibit 7a.

		rear legs		
F Asian Elephant	?	Euthanized, osteoarthritis in many joints/tuberculosis	1999	Feld Entertainment (Ringling)
Dancer	16	Euthanized, legs in poor condition	2000	Black Beauty Ranch
Nancy	46	Euthanized, chronic arthritis	2000	National Zoo
F Asian Elephant	?	Euthanized, degenerative osteoarthritis	2000	Feld Entertainment (Ringling)
Candy	49	Euthanized, severe arthritis	2001	Denver Zoo
F Asian Elephant	?	Euthanized, chronic osteoarthritis	2001	Feld Entertainment (Ringling)
F Asian Elephant	?	Euthanized, chronic osteoarthritis	2001	Feld Entertainment (Ringling)
Cindy	40	Euthanized, severe arthritis	2002	Point Defiance Zoo
King Tusk	57	Euthanized, had osteoarthritis	2002	Feld Entertainment (Ringling) s
Casey	52	Age and foot infections	2003	Kansas City Zoo
Tammy	53	Euthanized, chronic arthritis	2003	Paws
F Asian Elephant	?	Euthanized, osteoarthritis	2003	Feld Entertainment (Ringling)
F Asian Elephant	?	Euthanized, osteoarthritis	2004	Feld Entertainment (Ringling)
Calle	37	Euthanized, chronic arthritis	2004	San Francisco Zoo
Tina	34	Foot problems	2004	The Elephant Sanctuary (from Vancouver Zoo)
Ginny	58	Euthanized, chronic arthritis	2004	San Antonio Zoo
Kali	59	Euthanized, chronic arthritis	2004	Hogle Zoo
Tinkerbelle	39	Euthanized, chronic foot problems	2005	San Francisco Zoo/PAWS
Toni	39	Euthanized, severe arthritis	2006	National Zoo

In conclusion, to end the painful foot and joint conditions suffered by elephants and to prevent further elephant deaths due to foot and joint problems, USDA should begin its inspections with the zoos identified in this petition and then proceed to inspect all exhibitors with elephants. Because these health problems are wide-spread among exhibited elephants, it is important that USDA give high priority to inspecting all exhibitors with elephants. Petitioner requests that USDA thoroughly and regularly examine the feet of exhibited elephants and their medical records. If the elephants

**(a) The Elephant Sanctuary**

The Elephant Sanctuary encompasses 2700 acres, making it the nation's largest natural habitat refuge developed specifically for the rehabilitation of endangered Asian and African elephants living in captivity.<sup>134</sup> This amount of space gives the elephants sufficient room to roam, explore, and exercise. The Elephant Sanctuary is licensed by the USDA and Tennessee Wildlife Resources Agency<sup>135</sup> and currently contains eleven elephants.<sup>136</sup> The 2700 acres is divided into two separate habitats of 2400 acres for the eight Asian elephants and 300 acres for the three African elephants.<sup>137</sup> The outdoor habitat of the elephants is comprised of green pastures, old-growth forests, and spring-fed ponds.<sup>138</sup> The Elephant Sanctuary is 450 times larger than the largest zoo exhibit housing elephants. In contrast to most zoos, where elephants are confined for at least 16 hours standing in their own waste, the elephants at the sanctuary have constant free access to their shelter and outdoor habitat, allowing them to walk whenever they want for many miles each day on natural substrates.<sup>139</sup> The Asian elephants currently have access to a 11,250 square foot heated barn, and a new 20,000 square foot barn is expected to be completed by October 2005. The African elephants have access to a 10,125 square foot barn.<sup>140</sup> The indoor flooring of the barns are concrete covered with rubber matting, equipped with radiant heat, and pitched to the back for drainage.<sup>141</sup> The elephants have constant access to the barns and may enter and leave at their own discretion.<sup>142</sup>

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<sup>134</sup> Buckley Decl. ¶¶ 1, 3.

<sup>135</sup> Id. ¶ 1.

<sup>136</sup> Id. ¶ 5.

<sup>137</sup> Id. ¶ 3.

<sup>138</sup> Id. ¶ 2.

<sup>139</sup> Id. ¶¶ 5, 6.

<sup>140</sup> Telephone Interview with Scott Blais, The Elephant Sanctuary (May 17, 2005).

<sup>141</sup> Buckley Decl. ¶ 4.

<sup>142</sup> Id. ¶ 5.

where she regularly stood in her own waste and received inadequate care.<sup>148</sup> Although the knee injury is permanent, her strength and mobility has improved enough for her to climb mountains and maintain a level of activity that has alleviated the need for foot and nail trimmings.<sup>149</sup> She has benefited greatly from the large amount of space at the sanctuary.<sup>150</sup>

3. Shirley, one of the oldest elephants at the Sanctuary at age 58, had leg injuries and uneven wear on her foot pads and nails as a result of 30 years in the circus and 23 years in a zoo. Since her arrival at the sanctuary, she has been very active and appears to have no discomfort in her crippled leg, and her nails and pads no longer require trimming.<sup>151</sup>

4. Bunny lived in a zoo for 45 years, where hard packed earth and concrete flooring caused foot infections that lasted nearly 20 years. At the sanctuary, she was treated with foot soaks in apple cider vinegar (instead of the industry standard of Epsom salts) and other homeopathic remedies. The natural substrates at the sanctuary allowed her feet to recover and prevented the problem from reoccurring, and within six months, her foot infections that she had suffered from for 20 years had healed.<sup>152</sup> The co-founder of the sanctuary explains that getting her off of concrete and onto more yielding natural surfaces allowed her feet to recover and prevented the problem from recurring.<sup>153</sup> She believes that the “sanctuary environment has reversed a condition that would have eventually cost Bunny her life.”<sup>154</sup>

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<sup>148</sup> Id. ¶ 7b.

<sup>149</sup> Id. ¶ 7b.

<sup>150</sup> Id.

<sup>151</sup> Id. ¶ 7c.

<sup>152</sup> Id. ¶ 7d.

<sup>153</sup> Id.

<sup>154</sup> Id.

improved. She now walks through terrain that she was not able to walk over in the past.<sup>158</sup>

The indoor and outdoor space provided at the sanctuary allows the elephants to roam and exercise freely, which greatly improves their health and well-being. These examples show that when elephants are provided with adequate space and living conditions, their feet and joints are able to heal even when they have been suffering from chronic conditions for many years.

**(b) PAWS Sanctuary**

The PAWS sanctuary also provides sufficient space for elephants to roam, explore, and exercise by providing 2300 acres for abused, neglected, and abandoned animals.<sup>159</sup> The sanctuary is currently home to eight elephants that have access to 175 acres of outdoor terrain that consists of rolling hills, grass, and some rocky areas.<sup>160</sup> Not only do the elephants have constant access to adequate outdoor space, but they also have unrestricted 24-hour access to a large amount of indoor space in the two barns, which are each 20,000 square feet with hydraulic gates and an indoor Jacuzzi pool.<sup>161</sup> This large amount of indoor and outdoor space gives the elephants enough room to move away from their waste and urine, thereby keeping their feet away from harmful bacteria that cause infections. The African elephant barn has heated concrete floors that are sloped for proper drainage, and the Asian elephant barn has dirt floors to provide a more natural substrate.<sup>162</sup> The elephants at the sanctuary receive 24 hour monitoring from trained staff

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<sup>158</sup> Id. ¶ 7h.

<sup>159</sup> Derby Decl. ¶¶ 2, 3.

<sup>160</sup> Id. ¶ 3; Telephone Interview with Janice Clark, PAWS (May 16, 2005).

<sup>161</sup> Derby Decl. ¶ 3.

<sup>162</sup> Id. ¶ 3.

at the sanctuary. Her condition has greatly improved as a result of her uninhibited access to large areas of natural substrate.<sup>170</sup>

3. As discussed above, the San Francisco Zoo chose to retire Tinkerbelle and Lulu to the sanctuary. Tinkerbelle had such severe foot problems that she had trouble walking, and unfortunately her condition was so far deteriorated that she had to be euthanized shortly after her transfer to the sanctuary.<sup>171</sup> Lulu, who suffered from recurring foot problems while at the San Francisco Zoo,<sup>172</sup> is adjusting to life at the sanctuary and currently has no foot or joint problems.<sup>173</sup>

4. Also discussed above, the Detroit Zoo transferred its elephants, Wanda and Winky, to the PAWS sanctuary.<sup>174</sup> Detroit Zoo Director Ron Kagan believed that the zoo could not properly care for and house the elephants during the cold months, when they cannot get outside for adequate exercise.<sup>175</sup> Wanda and Winky suffered from chronic arthritis and foot abscesses, but since their transfer to the sanctuary, both elephants' conditions have improved greatly as a result of being able to move around freely outdoors on natural substrates.<sup>176</sup>

5. Mara and "71" are elephants who do not suffer from any foot or joint problems, as a result of having adequate living conditions and access to sufficient space to move and exercise. Mara lived for a short time at a zoo where she was chained, but was soon transferred to a larger facility that provided her with freedom to move. She was

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<sup>170</sup> Id. ¶ 10.

<sup>171</sup> Id. at ¶ 14; Press Release, San Francisco Zoo, Asian Elephant Tinkerbelle Is Euthanized (March 25, 2005), available at <http://www.sfzoo.org/generated/pressReleases/285/Tinkerbelle.pdf>.

<sup>172</sup> See infra pp 19-22.

<sup>173</sup> Derby Decl. ¶ 8.

<sup>174</sup> Id. ¶ 12.

<sup>175</sup> See Hugh McDiarmid Jr., Detroit Zoo to Free Elephants: Animals Going to a Refuge, Detroit Free Press, (May 20, 2004), available at [http://www.freep.com/news/metro/zoo20\\_20040520.htm](http://www.freep.com/news/metro/zoo20_20040520.htm) (quoting a memorandum by Zoo Director Ron Kagan).

<sup>176</sup> Derby Decl. ¶ 12.

regulations by requiring that zoos that exhibit elephants fully comply with the agency's adequate space and conditions regulations. Specifically, petitioner seeks the following:

(1) USDA should issue an interpretive rule<sup>181</sup> explaining its adequate space and conditions rules for elephants at zoos, circuses and other exhibitors. Petitioner requests that the interpretive rule specify the following:

(a) Inadequate space provided for captive elephants (including indoor and outdoor enclosures) and inadequate conditions (including amount of time confined, type of substrate, and cleanliness of floors) cause foot and joint problems in elephants. The presence of foot and joint problems in elephants is a sign that exhibitors are not meeting the AWA's requirements for adequate space and conditions.

(b) Elephant enclosures shall be large enough to allow exhibited elephants to exercise similarly to how elephants exercise in the wild;

(c) In order for USDA to effectively enforce the adequate space and conditions rules, elephant exhibitors are required to send their medical records to USDA regional inspectors quarterly to review. Inspectors will review the records prior to visiting the exhibit and observe the physical condition of the elephant during their on-site inspections. This visual observation includes picking up the elephants' feet to observe problems with the feet; and

(d) When the agency finds that elephants are suffering from chronic foot and joint problems, the agency will conclude that this is an indication of inadequate care, inadequate space and living conditions. USDA will cite violators of the adequate space and conditions regulations and require that the exhibitor enlarge the space and improve the conditions or move the elephants to a better environment, such as a sanctuary

(e) The agency will consider exhibitors to be in violation of the adequate care, space and conditions regulations when elephants develop chronic foot problems, and the symptoms of those problems are treated (through the use of antibiotics, anti-inflammatory and pain-killing drugs) without addressing the cause (inadequate space and conditions).

(2) USDA should immediately inspect all elephant exhibitors beginning with the zoos discussed in this petition that currently have elephants suffering from chronic foot and joint problems and confiscate elephants in poor condition. These zoos include: National Zoo, Lee Richardson Zoo, Abilene Zoo, Reid Park Zoo, Los Angeles Zoo, and Cameron Park Zoo.

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<sup>181</sup> Petitioner notes that USDA has established animal welfare "policies." USDA explains that the majority of these "policies" are actually legally defined as "interpretive rules." USDA, Animal Care Answers, at <http://www.aphis.usda.gov/ac/q2.html> (last visited Aug. 25, 2004).