



101 <i>Elephas maximus</i>		EndangeredApp. I		Asiatic elephant
Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
26 Aug 1967	Donation from SCOTT R-UNK	METROZOO	Loan Out to RINGLING-UNK	11 Sep 1992
2 Jun 1995	Loan Returned to Us RINGLING-UNK	METROZOO		
<u>Sex-Contraception</u> Male -		<u>Birth type:</u> Captive Born		
<u>Hybrid status</u> Not a hybrid		<u>Birth Location:</u> Trivandrum Zoo		
<u>Enclosure</u> 19 - Asian Elephant, back		<u>Birthdate-Age:</u> 8 Jun 1966 - 40Y,9M,14D		
<u>Rearing:</u> Hand		<u>House Name:</u> DALIP		
<u>Regional Studbook</u> 139 - AZA				

882 <i>Elephas maximus</i>		EndangeredApp. I		Asiatic elephant
Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
2 Jul 1981	Birth	METROZOO	Loan Out to CALGARY-103907	14 Sep 1992
<u>Sex-Contraception</u> Male -		<u>Birth type:</u> Captive Born		
<u>Hybrid status</u> Not a hybrid		<u>Birth Location:</u> Miami Metrozoo		
<u>Enclosure</u> REMOVED		<u>Birthdate-Age:</u> 2 Jul 1981 - 25Y,8M,20D		
<u>Sire</u> 101 at METROZOO		<u>Dam</u> 102 at METROZOO		
<u>Rearing:</u> Parent		<u>Regional Studbook #:</u> 141 - AZA		
<u>House Name:</u> SPIKE		<u>Permit:</u> US 818205 - OTHER		

Y0M072 <i>Elephas maximus</i>		EndangeredApp. I		Asiatic elephant
Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
5 Dec 2000	Loan In from COMMERFRD-NELLIE	METROZOO		
<u>Sex-Contraception</u> Female -		<u>Birth type:</u> Wild Born		
<u>Hybrid status</u> Not a hybrid		<u>Birth Location:</u> INDIA		
<u>Enclosure</u> 18 - Asian Elephant, front		<u>Birthdate-Age:</u> ~ 1969 - 38Y,2M,19D +/-1 Yr.		
<u>Rearing:</u> Unknown		<u>Regional Studbook #:</u> 84 - AZA		
<u>House Name:</u> Nellie		<u>Studbook Name:</u> Neela		

269 <i>Loxodonta africana africana</i>		EndangeredApp. I		South African bush elephant
Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
1 Jan 1979	Purchase from CATSKILL	METROZOO		
<u>Sex-Contraception</u> Female -		<u>Birth type:</u> Wild Born		
<u>Hybrid status</u> Not a hybrid		<u>Birth Location:</u> BOTSWANA		
<u>Enclosure</u> 52 - African Elephant, front		<u>Birthdate-Age:</u> ~ 1976 - ~30Y		
<u>Sire</u> WILD at BOTSWANA		<u>Dam</u> WILD at BOTSWANA		
<u>Rearing:</u> Parent		<u>Regional Studbook #:</u> 145 - AZA		
<u>House Name:</u> PEGGY				

270 <i>Loxodonta africana africana</i>		EndangeredApp. I		South African bush elephant
Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
1 Jan 1979	Purchase from CATSKILL-UNK	METROZOO		
<u>Sex-Contraception</u> Female -		<u>Birth type:</u> Wild Born		
<u>Hybrid status</u> Not a hybrid		<u>Birth Location:</u> BOTSWANA		
<u>Enclosure</u> 52 - African Elephant, front		<u>Birthdate-Age:</u> ~ 1976 - ~30Y		
<u>Sire</u> WILD at BOTSWANA		<u>Dam</u> WILD at BOTSWANA		
<u>Rearing:</u> Parent		<u>Regional Studbook #:</u> 146 - AZA		
<u>House Name:</u> MABEL				

928 <i>Loxodonta africana africana</i>		EndangeredApp. I		South African bush elephant
Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
11 Nov 1981	Purchase from CATSKILL-UNK	METROZOO		
<u>Sex-Contraception</u> Male -		<u>Birth type:</u> Wild Born		
<u>Hybrid status</u> Not a hybrid		<u>Birth Location:</u> ZIMBABWE		
<u>Enclosure</u> 52 - African Elephant, front		<u>Birthdate-Age:</u> ~ Apr 1980 - ~26Y,11M		
<u>Sire</u> WILD at WILD		<u>Dam</u> WILD at WILD		
<u>Rearing:</u> Parent		<u>Regional Studbook #:</u> 197 - AZA		
<u>House Name:</u> MACHITO		<u>Old Accession #:</u> 238		

Report Start Date  
1/1/2005

# Specimen Report for METROZOO / 882

Report End Date  
3/23/2007



Taxonomic name: *Elephas maximus*

Family: Elephantidae

Common name: Asiatic elephant

Order: Proboscidea

## Current information

Sex:	Male	Sire ID:	101 at Miami Metrozoo
Birth type:	Captive Born	Dam ID:	102 at Miami Metrozoo
Birth Location:	Miami Metrozoo	Rearing:	Parent
Birthdate-Age:	2 Jul 1981 - 25Y,8M,20D	Hybrid:	Not a hybrid
Time since last Acq:	25Y,8M,20D as of report end date		

<u>Date in</u>	<u>Acquisition - Vendor/local Id</u>	<u>Holder</u>	<u>Disposition - Recipient/local Id</u>	<u>Date out</u>
2 Jul 1981	Birth	METROZOO / 882	Loan Out to CALGARY / 103907	14 Sep 1992

<u>Date</u>	<u>Note type</u>	<u>Comments</u>
9 May 2006	Loan Update	Loan Addendum: A Biological Sample Addendum was agreed upon and signed by METROZOO (S. Stephens, Director) on 8 May 2006; forwarded to CALGARY (D. Snell, Registrar). New Address: Changed from <POB 3036, Station B, Calgary, Alberta, Canada T2M 4R8> to <1300 Zoo Road NE, Calgary, Alberta, T2E 7V6 Canada>. RWR
20 Sep 2006	Loan Update	CALGARY (Deanna Snell, Registrar) responded to METROZOO Loan Update Questionnaire -> Animal is still living; in a breeding situation; no new offspring produced since 16 Nov 2004; breeding observed and male is in a breeding situation; no reported medical problems other than chronic foot care issues; they wish to continue the loan. NOTE: A specimen report was provided as requested; a Biological Sample Agreement for semen collections was signed [14 July 2006] as an addendum to the current loan agreement. RWR

Report Start Date  
1/1/2005

# Specimen Report for METROZOO / 101

Report End Date  
3/23/2007



Taxonomic name: *Elephas maximus*

Family: Elephantidae

Common name: Asiatic elephant

Order: Proboscidea

## Current information

Sex:	Male	Sire ID:	UNK at Trivandrum Zoo
Birth type:	Captive Born	Dam ID:	UNK at Trivandrum Zoo
Birth Location:	Trivandrum Zoo	Rearing:	Hand
Birthdate-Age:	8 Jun 1966 - 40Y,9M,14D	Hybrid:	Not a hybrid
Time since last Acq:	11Y,9M,20D as of report end date		

<u>Date in</u>	<u>Acquisition - Vendor/local Id</u>	<u>Holder</u>	<u>Disposition - Recipient/local Id</u>	<u>Date out</u>
26 Aug 1967	Donation from SCOTT R / UNK	METROZOO / 101	Loan Out to RINGLING / UNK	11 Sep 1992
2 Jun 1995	Loan Returned to Us RINGLING / UNK	METROZOO / 101		

<u>Date</u>	<u>Type</u>	<u>Value</u>	<u>Units</u>	<u>Comments</u>
26 Jan 2005	live animal weight	12890.	pound	
17 May 2005	live animal weight	5.9025	ton	
12 Jun 2005	live animal weight	5.505	ton	
18 Jul 2005	live animal weight	5.811	ton	
25 Jul 2005	live animal weight	6.09	ton	
1 Aug 2005	live animal weight	6.11	ton	12,220.0# actual
10 Jan 2006	live animal weight	6.433	ton	12866.0# actual
19 Aug 2006	live animal weight	6.004	ton	12,008.0# actual
18 Oct 2006	live animal weight	5.876	ton	1,1752.0# actual
20 Nov 2006	live animal weight	5.975	ton	11,950.0# actual
20 Feb 2007	live animal weight	6.374	ton	
28 Feb 2007	shoulder height	9.5	feet	
20 Mar 2007	live animal weight	6.405	ton	

<u>Date</u>	<u>Note type</u>	<u>Comments</u>
13 Jan 2005	Medical diagnosis	Per Dr. Christine L. Miller, DVM (results of radiograph reviews of elephant feet) -> None of the xrays were recognized to have any signs of infection or other degeneration. Some elephants had variations of what is probably normal for them. CLM/RWR
		This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
12 May 2005	Research Sample	Animal broke the distal tip of ivory from R/tusk; staff did not observe how this occurred. The ivory is somewhat triangular in shape; measurement = Length: 14.2 cm Wt and weight = 130.7 grams. The ivory was submitted to vet staff for transfer to USDI Forensics Lab in Oregon. TW/RWR
7 Jun 2005	Medical procedure	Day 1 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing; a blood sample was drawn for herpes testing. TW/RWR
9 Jun 2005	Medical procedure	Day 3 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing. TW/RWR
15 Jun 2005	Research Sample	Per AZA "Guidelines for comprehensive elephant health monitoring program" (March, 2005) the "minimum database" includes serologic testing for elephant herpes virus. Serum samples were collected today for shipment to: Laura Richman, National Zoo, Dept. of Pathology, in Washington DC. These are viruses carried by some of our captive elephants, that have resulted in the death of some animals, especially young calves. The results may be used in helping to assess risk factors when breeding recommendations are made for captive populations. CLM/RWR
		This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
20 Jun 2005	Diet	Current Diet Each (1.1 #101, Y0M072) -> AM Diet: 1 bale coastal hay (increase as needed); 20.0#+ browse from approved browse list. PM Diet: (101) -> 14.5# carrots, 10.0# each Manna Pro Elephant Supplement and Mazuri ADF-16 Regional; 2 bales coastal hay (increase as needed). (Y0M072) -> 14.5#



		carrots, 8.0# Manna Pro Elephant Supplement; 1 bale coastal hay. REASON FOR CHANGE: Female (Y0M072) diet item Manna Pro Elephant Supplement was reduced by 2.0# due to weight management concerns. RT/RWR
21 Jun 2005	Reproductive behavior	Observed male (101) mounting female (Y0M072); on this day no copulation was observed. TW/RWR
23 Jun 2005	Medical diagnosis	Per Erin Latimer, Smithsonian/NZP, Dept. of Pathology -> Nellie (Y0M072) and Dalip (101) both had low results in the ELISA, so it looks like they are not producing EEHV antibodies at this time. TW/RWR
12 Jul 2005	Breeding encounter	This morning male (101) was observed to pursue and attempted (7) successive, rapid mountings of female (Y0M072); female was observed to stand for male at times and retreated at other times. Behaviors Exhibited: Trumpeting, squeaking, and roaring vocalizations were heard. One successful copulation was observed at 4:15 pm, penetration and ejaculation confirmed by another Mammal Keeper (A. Neill, Giraffe Area). TW/RT/RWR
13 Jul 2005	Adult/adult behavior	Unusual Behavior -> Male (101) and female (Y0M072) refusal to shift into the Asian Elephant Barn at the end of the day. This abnormal behavior exhibited by 1.1 (101, Y0M072) was due to male (101) being in musth. RT/RWR
25 Jul 2005	Research Musth	Musth Observation -> Animal appears to be gaining weight (up 564.0 lbs in 1 week); appetite has improved. Presumed to be coming out of musth. TW/RWR
20 Aug 2005	Musth Cycle	Musth Observation (Gland Excretia) -> L/temporal gland appears to be clogged. Black, thick, malodorous secretion observed on L/cheek. Keepers cleaned out exterior rim of gland, upon further manipulation observed brown material inside gland. Rinsed gland with water and dilute Nolvasan, monitoring. TW/RWR
27 Sep 2005	Medical procedure	1.0 Asian elephant 101 blood draw L/ear. Reason: Unreported. DF/RWR
5 Oct 2005	Musth Cycle	1.0 Asian Elephant 101 thick dark secretion coming from L/temporal gland in AM, secretion had ceased in PM. DF/RWR
10 Oct 2005	Feeding	1.1 Asian Elephant 101, Y0M072 for undetermined reason, both are eating less hay than normal. Will continue to adjust hay and monitor. TW/RWR
22 Nov 2005	Research Sample	Tail Hair Samples Collected from -> 1.2 African Elephant 928, 269, 270 and 1.1 Asian Elephant 101, Y0M072 for use by US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory, 1490 East Main Street, Ashland Oregon 97520. TW/RWR
22 Feb 2006	Musth Cycle	1.0 Asian Elephant 101 Musth TGS - just beginning / Urine dribbling just starting. TW/RWR
22 Feb 2006	Musth Behavior	1.0 Asian Elephant 101 Musth Behavior: Uncooperative to shift commands. TW/RWR
27 Feb 2006	Musth Cycle	TGS 3/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
2 Mar 2006	Medical procedure	1.0 Asian Elephant 101 uncooperative during blood draw attempt, but did shift. TW/RWR
2 Mar 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
9 Mar 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
12 Mar 2006	Musth Cycle	TGS 4/Urine C; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
13 Mar 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
28 Mar 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
30 Mar 2006	Musth Cycle	TGS 2/Urine A/B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
31 Mar 2006	Musth Cycle	TGS 2/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
1 Apr 2006	Musth Cycle	TGS 2/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
2 Apr 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR



3 Apr 2006	Musth Cycle	TGS 3/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
4 Apr 2006	Musth Cycle	TGS 1/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
5 Apr 2006	Musth Cycle	TGS 2/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
6 Apr 2006	Musth Cycle	TGS 2/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
7 Apr 2006	Musth Cycle	TGS 1/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
9 Apr 2006	Musth Cycle	TGS 2/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
10 Apr 2006	Musth Cycle	TGS 1/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
16 Apr 2006	Musth Cycle	TGS 2/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
21 Apr 2006	Musth Cycle	TGS 1/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
24 Apr 2006	Musth Cycle	TGS 2/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
25 Apr 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
1 May 2006	Musth Cycle	TGS 1/Urine A/B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
1 May 2006	Research Sample	1.0 Asian elephant 101 staff attempted semen collection via manual manipulation via rectum for 15 minutes with no result (no erection and no ejaculate). TW/RWR
2 May 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
3 May 2006	Musth Cycle	TGS 2/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
4 May 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
5 May 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
8 May 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
9 May 2006	Musth Cycle	TGS 4/Urine B/C; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
10 May 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
13 May 2006	Musth Cycle	TGS 4/Urine B/C; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
17 May 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
20 May 2006	Musth Cycle	TGS 4/Urine C; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. RT/RWR
21 May 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. RT/RWR
26 May 2006	Musth Cycle	TGS 4/Urine B/C; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
27 May 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the



		change will be noted. RT/RWR
4 Jun 2006	Musth Cycle	TGS 3/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
13 Jun 2006	Medical diagnosis	Blood Screening Results (1.0 Asian elephant 101) -> Lab results reveal an elevated creatine level, sample ran (2) times, 4.0 mg/dl and 3.8 mg/dl. TW/RWR
15 Jun 2006	Medical diagnosis	Blood Sample Values: Collection Date 13 Jun 2006 (1.1 Asian elephant 101, Y0M072) and (1.2 South African bush elephant 928, 269, 270) the following results were reported by Vet Department -> 1.2 South African bush elephant 928, 269, 270 blood work is within normal limits. 1.1 Asian elephant 101, Y0M072 have some abnormalities. Male (101) has an elevated creatinine - this value was rechecked on the same sample and was still high - this may indicate a degree of kidney failure (possibly chronic and slowly over last few years) vet will recheck to determine how musth cycle may be effecting the levels. A sample can be submitted to the lab next week; vet service request for keepers to attempt to collect an extra red-top tube from male (101) depending on his behavior status. Female (Y0M072) is mildly anemic - possibly a mild advancement of something more subtle going on in earlier blood screenings. It is not clear what might be causing the problem, but another female (XM1048) was treated for a similar problem a few years ago. Female (XM1048) did respond well to an equine iron-vitamin supplement added to her grain daily for ~6 months. Prescribed Supplement (0.1 Asian elephant Y0M072) Ad Lib to a mineral-salt blocks (presentation pending input from former area staff). CLM/TW/RWR
20 Jun 2006	Medical diagnosis	Blood Screening Results (1.0 Asian elephant 101) -> Lab results reveal an elevated creatine level, 3.9 mg/dl. TW/RWR
21 Jun 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
22 Jun 2006	Breeding management	1.1 Asiatic elephant 101, Y0M072 exhibited together from 9:30 AM - 1:30 PM, male observed following female persistently and investigating her tail area. TW/RWR
22 Jun 2006	Musth Cycle	TGS 1/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
22 Jun 2006	Adult/adult behavior	1.1 Asiatic elephant 101, Y0M072 exhibited together from 9:30 AM - 1:30 PM, male observed following female persistently and investigating her tail. TW/RWR
20 Jul 2006	Medical treatment	Day 1 of 10 (1.0 Asian elephant 101) -> Prescribed Sulfatrim BID (dosage unreported); Reason: recent tusk condition. DF/RWR
26 Aug 2006	Medical diagnosis	Urine Screening Results (1.0 Asian elephant 101) -> Lab results reveal urine sample was within normal limits, but not concentrated. Keepers will attempt to collect 2-3 more samples to confirm this test result. NOTE: Urine was collected due to abnormal changes in blood values to further diagnose by urine sample screening. TW/RWR
26 Aug 2006	Medical diagnosis	Trunk Wash Sample/Annual TB Test Results: Per Metrozoo Vet Dept. = 1.1 Asian elephant 101, Y0M072 -> NEGATIVE for any mycobacterium growth; 1.1 South African bush elephant 928, 269 -> NEGATIVE for any mycobacterium growth; 0.1 South African bush elephant 270 -> Vet is waiting on this result due to lab having problems with contamination with one of the samples. NOTE: Samples undergo a 3 month culture process before they are able to provide the diagnosis. CLM/TW/RWR
5 Sep 2006	Medical observation	1.0 Asian elephant 101 filling in R/tusk appears to be coming out; hole is not visible at this time. TW/RWR
7 Sep 2006	Medical diagnosis	Urine Screening Results (1.0 Asian elephant 101) -> Lab results reveal urine sample was still dilute unfortunately, continuing to show minimal protein levels (even with some floor contamination); condition unchanged. Pending the outcome of a couple more spontaneous urine samples, prior to any water deprivation tactics. Vet plans to recheck blood work in five days (Tuesday). TW/CLM/RWR
13 Sep 2006	Medical diagnosis	Urine Screening Results (1.0 Asian elephant 101) -> Lab results reveal urine sample was still dilute, mildly anemic (first diagnosis), creatinine and BUN are at the high end of the normal range. Presumptions: Potential for this phenomenon to be tied to musth cycle, but cannot be confirmed by other elephant vet's and the books, no one has recognized this trend. Possible that condition is also resolving. Current Plan: Continue attempts to collect a few urine samples to monitor, cancel plans for water deprivation and see how condition develops with time. TW/CLM/RWR
14 Sep 2006	Trained Behavior	Animal: 1.0 Asian Elephant "Dahlip" (101) Trainer: Tarah Bedrossian



Staff Required: Two qualified Elephant Keepers

Location: Asian elephant barn

Time: Shifting times, or whenever possible

Date Started: 11 Sept 2006 Date Completed: 14 Sept 2006

Materials Required:

- " Target pole/Target (buoy)
- " Bite sized treats (chopped produce, grain, cereal, etc)
- " Whistle
- " Treat container, belted on waist

Behavior to be established, goal (reason) for behavior:

Target: The elephant will touch its forehead to a designated target (buoy or fist). The "Target" can be beneficial for shifting, directing the elephant, and body positioning. The present command "steady" will be used if the elephant needs to hold its forehead on the target.

Training Plan:

1. The elephant to be trained, must first be conditioned to the bridge (in this case a dog whistle). The beginning process will require several short bridge and reward sessions. The trainer will place the reward into the elephant's trunk, and bridge the instant the elephant places the reward into its mouth. After several bridge and reward sessions the elephant will begin to relate the sound of the whistle, to receiving a food reward.
2. Next, the elephant will need to learn to move toward the target and to become desensitized to touching its forehead to the target. The trainer will bridge and reward as the animal moves toward the target (buoy). The elephant will be asked to "move up, Target" until the forehead makes contact with the target. The instant the forehead and target touch, the trainer will bridge, jackpot reward, and say "good, Target". Similar sessions should take place until the animal responds to the command "Target" by moving and positioning so that its forehead touches the target.
3. Once the elephant understands the new command "target", other pre-existing behaviors like "foot" can be directed using the target. The trainer will use a command, for instance, "foot" while holding the target in a position that the top of the elephant's foot will touch the target at a desired height. The trainer will bridge and reward each time the foot touches the target. The target can be held by a foot care bar or into a stall, safely, to condition the elephant to move its foot toward the target.
4. The trainer will continue to use the target buoy as a visual cue to position every foot. The target does not have to touch any particular spot on the foot, but should be positioned so that the animal can move its leg/foot toward the target. In the beginning steps the top of the foot is used since the placement and chances of foot and target contact are most probable. The next step would be to present the target to the side of a foot, say "foot" and the elephant should move its foot toward the target until the foot and target touch. The trainer should be careful to position the target small distances at a time. If the elephant does not attempt to move the foot towards the target, the trainer should return to step 4, until the animal has a good understanding. Keep in mind the elephants are currently trained to move away from a keeper's ankus, and moving toward a target buoy may be challenging. The trainer should be sure the animal is responding consistently to the command being asked before moving to the next step. Sessions should be short, to maintain interest and compliance.
5. Once the elephant responds consistently to the commands, and moves its feet toward the target, the elephant and trainer are ready for the next step. For the behavior "come-in-tight": the elephant will be positioned so that when asked "come-in-tight" the animal's side will come into contact with the target. The trainer will bridge the instant the side touches the target. The trainer will continue to ask "come-in-tight" in different locations. The elephant should not remove its side from the target until told "alright". The trainer should use the command "steady" to keep the elephant from moving its side away from the target. In the beginning the trainer should bridge and reward as the animal holds its position (side touching target). If the animal pulls away the trainer can say "come-in-tight" again, the elephant should reposition so that its side touches the target again. The first sessions should not require the elephant to hold in position too long. The trainer should always aim to have a successful training session.

Once the animal appears to be responding well to the training sessions and is excited to participate, the frequency of rewards can decrease. TW/TB/RWR

15 Sep 2006 Research Sample

SERVICE REQUEST (Internal/Educational/Graphics Dept/Signage) -> 1.0 Asian elephant 101 staff collected and weighed total fecal output of this animal for a 24 hour period; Total Fecal weight = 540.0 lbs. NOTE: This was done to collect data to add to the text of a graphic/sign for an animal exhibit. The



		comment was made that his is a very mature male Asian elephant; it was suggested this may vary for younger animals of different sex and species. TW/RWR
1 Oct 2006	Trained Behavior	Stationing/Tusk Removal (1.0 Asiatic elephant 101) -> Bull shifted/responded well in AM/PM for target training. Session: Keeper touched L/tusk with hacksaw, behaviorally uneventful. GOAL: Staff is conditioning animal for future tusk trim. DF/RWR
2 Oct 2006	Medical observation	1.0 Asiatic elephant 101 growth behind knee on R/rear leg appears to be raw and tender. TW/RWR
10 Oct 2006	Research Sample	Blood Draw (1.1 Asiatic elephant 101, Y0M072) -> Blood samples collected for EEHV study (18 ml from each); follow-up blood screening for renal function in male 101 and anemia for female Y0M072. NOTE: Pending further information on lab, primary investigator to study and/or facility requesting samples. TW/RWR
17 Oct 2006	Research Sample	1.0 Asiatic elephant 101 ~6 inches of ivory cut from each tusk by keeper staff with veterinary supervision. Target tusk was R/tusk due to filling problems from previous cavity. Animal was very well behaved. Disposition of ivory is US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory, 1490 East Main Street, Ashland, Oregon 97520. TW/RWR
17 Oct 2006	Weight/Length	Ivory Samples sent to US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory (1.0 Asiatic elephant 101) -> L/tusk cutting: length- 26.5 cm, diameter- 11.3 cm, weight- 1651.3 gm; R/tusk cutting: length- 23 cm, diameter- 12.5 cm, weight- 1707.5 gm. TW/RWR
21 Nov 2006	Medical procedure	Dental Procedure/Tusk Root Canal (1.0 Asiatic elephant 101) -> Bull shifted into elephant barn and stationed in a stall for approximately 1½ hours with tusks through the enclosure bars. Procedures Performed: Consulting dentists, Dr. Randy Groeh and Dr. Richard Souvion performed procedure on R/tusk. Root canal done, cavity flushed with hydrogen peroxide and distilled water, cavity sealed with calcium hydroxide and filled with Centrix Encore Composite Resin Paste. Behavior: Animal very well behaved and did not break station throughout entire procedure. Post Procedure: Animal restricted to barn for 1 hour post procedure and then placed back onto exhibit. TW/RWR
21 Nov 2006	Trained Behavior	Animal: 1.0 (101) Asian Elephant "Dahlip" Trainer: Tarah Bedrossian Staff Required: 3 Location: Asian elephant barn stall 1 Time: AM/PM shift times Date Started: 18 Sept 2006 Date Completed: 21 Nov 2006 Materials Required: " Treats, whistle, target pole " Hacksaws, extra blades " Hose, on light spray " 2: 2 inch wide X 5 ft long poles " Video camera Behavior to be established, goal (reason) for behavior: Tusk Trim: Dahlip will be trained to position his tusks, using a target, so that they extend out of the stall on either side of the 2nd southeast post. Once in position one keeper will slide the two poles into place (lower one first) while the trainer feeds and steadies the elephant. Dahlip will remain in this position so that his right tusk, containing a cavity, can be trimmed back the amount needed. Depending on the elephant's behavior and cooperation the left tusk will also be trimmed to the length the right tusk was trimmed. Training Plan: 1. Dahlip has been successfully target trained, and he is consistent with targeting (touching his head to the target, as well as coming in tight touching his side to a buoy while his head remains on the target). 2. Dahlip will be asked to "target" and if necessary "come-in-tight", he will be bridged once he aligns his tusks around the second southeast pole. * Note: once Dahlip has his tusks positioned it is important all people present remain where they are standing. Everyone should be standing in a safe area, toward Dahlip's head. Dahlip may jerk his head around if someone steps out of his sight, especially behind him. 3. The trainer will ask Dahlip to "move up" and "target" so that his right tusk is upwards enough for the bottom pole to be slid into place. The trainer will bridge when he moves his right tusk upward. 4. Once Dahlip is steady, the trainer will ask the secondary trainer to slide the bottom pole through the



brackets. The trainer will bridge when Dahlip raises his tusks so that the pole can easily be placed. (If necessary the bottom pole will also be pushed through a fire hose strip for added safety)

5. The trainer will continue to steady Dahlip on the target while feeding him an occasional treat. Once the trainer feels the animal is ready, the secondary trainer will begin sliding the second pole into the brackets. The trainer will bridge as the animal allows the pole to be positioned and remains on the target.

6. Once both poles are placed, and the animal is steadied, the secondary trainer will begin introducing a light hose spray to the tusk to be trimmed (to aid in cooling the saw blade, and keeping it free of debris) The trainer will offer different types of food rewards (alfalfa, grain, sweet feed, chopped produce) to keep the animal steady and calm.

7. The trainer will ask the 3rd trainer present to begin the saw desense, and a mock sawing session (both tusks) will commence. Once Dahlip reaches this point and continues to remain steady, the trainers will begin timing the sessions. We estimate the sawing will take 15 minutes, so the goal will be to get Dahlip to remain in position for the mock sawing for at least 15 minutes. Every desense session will not have to last 15 minutes, but we should be certain he will tolerate and be content eating for 15 minutes while three trainers are working close to him (sawing, hosing, feeding) For one or more mock sessions we may consider having all staff present (vet, curators, etc.) that plan to be present the day of the actual tusk trim.

8. Once the tusk trim is complete, the primary trainer will ask for the two poles to be removed, and the primary trainer will ask Dahlip to: "All Right, Back Up". Once the animal backs up and removes his tusks from position, the trainer can release him, reward, and shift him. Once the animal is released, those present may freely move about. TW/TB/RWR

27 Dec 2006 Trained Behavior

Volunteer Ejaculation Conditioning (1.0 Asiatic elephant 101; 1.0 South African bush elephant 928) -> Elephant Department staff is initiating a training plan to enable them to collect semen from both male elephants. CONDITIONING SESSION COMPONENTS: Cue = "Drop"; Bridging Stimulus = whistle; Reward = Grain, alfalfa, and whole fruits/banana trees for jackpot reward. SESSION PLAN: A Session Plan was devised with a 10 point bullet list of behavioral cues; subject stimuli; trainer responses to behaviors and a rough guideline to shaping the behavior with an operant conditioning technique. GOAL: To condition specimens to volunteer ejaculation of semen. REASON: Samples for use in artificial insemination, reproductive evaluation and to enhance various extenders in an effort to improve cryopreservation and viability of elephant sperm. The protocols for handling and shipping the semen samples will be from: Wendy K. Kiso, M.N.A.S., Predoctoral Research Fellow, Smithsonian's National Zoological Park and Conservation & Research Center, Indianapolis Zoo, 1200 W. Washington Street, Indianapolis, IN 46222-0309; 317-630-3267; kkiso@indy zoo.com, kisow@si.edu. TW/TB/RT/RWR

2 Jan 2007 Trained Behavior

Volunteer Ejaculation Conditioning (1.0 Asiatic elephant 101) -> Session for semen collection attempted. Animal did well in ERC and on leg chains (both rear and L/fore leg) and rectal clean out; did not attain a full erection and became a little nervous (vocalizing) at end of session. Session Duration: 12 ½ minutes. TW/RWR

1 Mar 2007 Trained Behavior

Volunteer Ejaculation Conditioning (1.0 Asiatic elephant 101) -> Session for semen collection attempted. While in ERC for semen collection attempt, bull attained a semi-erect penis and urinated. Urine sample collected mid-stream and submitted to lab. No sperm cells seen in the sample. Session Duration: Unreported. TW/RWR

16 Mar 2007 Trained Behavior

Volunteer Ejaculation Conditioning (1.0 Asiatic elephant 101) -> Sessions for semen collection attempted. While in ERC for semen collection attempt, bull responded well to semen collection attempt, did not reach full erection. Session Duration: Unreported. TW/RWR

20 Mar 2007 Trained Behavior

Volunteer Ejaculation Conditioning (1.0 Asiatic elephant 101) -> Sessions for semen collection attempted. While in ERC for semen collection attempt, bull did well for 2 semen collection attempts. Male attained an erection through most of the first session and was semi-erect for the second session. Session Duration: 1st session 15 min.; 2nd session 8 min. TW/RWR



Taxonomic name: *Loxodonta africana africana*  
Common name: South African bush elephant

Family: Elephantidae  
Order: Proboscidea

**Current information**

Sex: Male Sire ID: WILD at Obtained From Wild  
 Birth type: Wild Born Dam ID: WILD at Obtained From Wild  
 Birth Location: ZIMBABWE Rearing: Parent  
 Birthdate-Age: - Apr 1980 - ~26Y,11M Hybrid: Not a hybrid  
 Time since last Acq: 25Y,4M,10D as of report end date

Date in	Acquisition - Vendor/local Id	Holder	Disposition - Recipient/local Id	Date out
11 Nov 1981	Purchase from CATSKILL / UNK	METROZOO / 928		

Date	Type	Value	Units	Comments
26 Jan 2005	live animal weight	8942.0	pound	
13 Jun 2005	live animal weight	9136.0	pound	
19 Aug 2006	live animal weight	9116.0	pound	
21 Sep 2006	live animal weight	9442.0	pound	
18 Oct 2006	live animal weight	9288.0	pound	
22 Nov 2006	live animal weight	8784.0	pound	
18 Dec 2006	live animal weight	9045.0	pound	
28 Feb 2007	shoulder height	9.458	feet	

Date	Note type	Comments
13 Jan 2005	Medical diagnosis	Per Dr. Christine L. Miller, DVM (results of radiograph reviews of elephant feet) -> None of the xrays were recognized to have any signs of infection or other degeneration. Some elephants had variations of what is probably normal for them. CLM/RWR  This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
7 Jun 2005	Medical procedure	Day 1 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing; a blood sample was drawn for herpes testing. TW/RWR
9 Jun 2005	Medical procedure	Day 3 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing. TW/RWR
15 Jun 2005	Research Sample	Per AZA "Guidelines for comprehensive elephant health monitoring program" (March, 2005) the "minimum database" includes serologic testing for elephant herpes virus. Serum samples were collected today for shipment to: Laura Richman, National Zoo, Dept. of Pathology, in Washington DC. These are viruses carried by some of our captive elephants, that have resulted in the death of some animals, especially young calves. The results may be used in helping to assess risk factors when breeding recommendations are made for captive populations. CLM/RWR  This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
2 Aug 2005	Trained Behavior	Semen Collection Conditioning -> Session: Animal was shifted into ERC and leg chains were applied to both rear legs and L/fore leg for rectal cleanout. Plan: Will continue daily as time allows for conditioning for semen collection attempts in the future. TW/RWR
23 Aug 2005	Research Sample	Semen Collection -> Session: Animal was shifted into ERC for semen collection attempt. Rectal cleanout done first, very relaxed and cooperative. Prostate stimulation done for ~15 minutes, achieved erection, then became relaxed and would not become erect again. No semen collected. Plan: Will continue daily as time allows for conditioning for semen collection attempts in the future. TW/RWR
1 Sep 2005	Medical observation	1.0 African Elephant 928 During AM bath routine, large areas of dry skin sloughed off of back, revealing pink pus filled sores. Vet checked and will monitor for now. TW/RWR
3 Sep 2005	Medical observation	1.0 African Elephant 928 sores on back appear the same, no more skin sloughing during bath. TW/RWR
4 Sep 2005	Individual behavior	0.1 African Elephant 269 at closeout unresponsive to commands, could not chain, would not station, for 20 minutes vocalizing, running from stall to stall in barn, banging bars and doors. After a timeout (30 minutes) stationed for grain and transferred to back paddock. Cause for this behavior unknown, no



		changes in staff, weather, routine, etc. TW/RWR
27 Sep 2005	Research Sample	1.0 African elephant 928 semen collection attempted; unsuccessful. Methods/Reason: Unreported. DF/RWR
27 Sep 2005	Medical procedure	1.2 African elephants (928, 269, 270) blood drawn, fecal sample collected. Reason: Unreported. DF/RWR
29 Sep 2005	Medical observation	1.0 African elephant 928 bleeding from L/nostril during foot care treatment (nails and cracks filed, pads trimmed on all but R/rear foot). Bleeding stopped prior to completion of treatment. No cuts or injuries observed. DF/RWR
22 Nov 2005	Research Sample	Tail Hair Samples Collected from -> 1.2 African Elephant 928, 269, 270 and 1.1 Asian Elephant 101, Y0M072 for use by US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory, 1490 East Main Street, Ashland Oregon 97520. TW/RWR
26 Nov 2005	Medical observation	1.0 African Elephant 928 Observed with a volumous white discharge from L/eye; appears to be cloudy/opaque area over pupil. TW/RWR
27 Nov 2005	Medical treatment	Prescribed Rx Day 1 of UFN (1.0 African Elephant 928) -> Vetropolycin topical ointment, BID to L/eye. Reason: Vet checked L/eye. Swab sample for culture collected. TW/RWR
28 Nov 2005	Medical observation	1.0 African Elephant 928 eye appears more opaque than when first reported. Accepting Rx without any difficulty. TW/RWR
3 Dec 2005	Medical observation	1.0 African Elephant 928 continue to medicate; no change in condition of eye. DF/RWR
17 Dec 2005	Individual behavior	1.0 African elephant 928 found in front moat and was able to reach stumble fence with trunk. Management Change: Animal was shifted to back paddock until moat issue resolved. DF/RWR
17 Jan 2006	Research Sample	1.0 South African bush elephant 928 observed with an erection and very excited, placed in ERC and a 1 ml pre-ejaculation sample was collected. Vet clinic examined sample within 5 minutes of collection and no spermatozoa were seen in sample. TW/RWR
2 Feb 2006	Musth Cycle	TGS 4/Urine D; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
4 Feb 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
5 Feb 2006	Medical observation	0.1 African Elephant 928 wound treated, small amount of pus observed. TW/RWR
5 Feb 2006	Musth Cycle	TGS 4/Urine C; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
15 Feb 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
17 Feb 2006	Musth Cycle	TGS 4/Urine C; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
20 Feb 2006	Musth Cycle	TGS 4/Urine A; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
22 Feb 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
23 Feb 2006	Musth Cycle	TGS 4/Urine A; NOTE: when a change in musth discharge occurs the change will be noted. TW/RWR
27 Feb 2006	Musth Cycle	TGS 4/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
2 Mar 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
9 Mar 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
11 Mar 2006	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
12 Mar 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
13 Mar 2006	Medical observation	Eye Condition Continues Day 105 (1.0 African elephant 928) -> R/eye cloudy, runny with white spot (possible ulcer) near center of eye, vets notified. DF/RWR
14 Mar 2006	Medical treatment	Day 1 of UFN (1.0 African elephant 928) -> Rx Vetrogel and atropine sulfate (topical antibiotic) BID; REASON: R/eye cloudy with an ocular discharge, vet checked. DF/RWR
15 Mar 2006	Medical observation	1.0 African elephant 928 R/eye still cloudy/runny with portion of eyelid swollen. DF/RWR
28 Mar 2006	Medical observation	Health Status: 1.0 South African bush elephant 928 eye treatment, no change, continue Rx UFN. TW/RWR
28 Mar 2006	Musth Cycle	TGS 2/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the



		change will be noted. TW/RWR
29 Mar 2006	Musth Cycle	TGS 0/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. DF/RWR
30 Mar 2006	Medical treatment	Prescribed Rx Day 1 of ? (1.0 South African bush elephant 928) -> Topical solutions, TID applied 100% and oral PerOs BID consumed 100%; Reason: R/eye infection. Health Status: Outer margins of eyeball becoming more vascular, and white/yellow area in middle of eye reducing in size. Animal still holding eye closed at times and ocular discharge is present. TW/RWR
30 Mar 2006	Musth Cycle	TGS 0/Urine A; NOTE: Bull may be coming out of musth at this time. TW/RWR
31 Mar 2006	Medical observation	1.0 South African bush elephant 928 R/eye, Rx topical TID and oral BID consumed 100%. Health Status: No change in condition of eye from yesterday. TW/RWR
1 Apr 2006	Medical treatment	Rx Change Day ? of ? (1.0 South African bush elephant 928) -> Triple antibiotic applied TID. Oral Rx consumed BID; Reason: R/eye infection. Health Status: Not Reported. TW/RWR
4 Apr 2006	Medical procedure	Rx Change Day 1 of ? (1.0 South African bush elephant 928) -> Triple antibiotic discontinued and other topical meds will go from TID to BID. Oral Rx will continue BID; consumed 100% Rx today; Reason: R/eye infection. Health Status: R/eye condition appears to be improving per vet evaluation today. TW/RWR
7 Apr 2006	Medical treatment	Rx Extended Day 1 of ? (1.0 South African bush elephant 928) -> Topical solutions, BID applied 100% and oral PerOs BID consumed 100%; Reason: R/eye infection. Health Status: Vet evaluated eye today and is extending current Rx regime. TW/RWR
10 Apr 2006	Medical treatment	1.0 African elephant 928 R/eye treatment topical ointment BID, consumed 100% of oral Rx. TW/RWR
11 Apr 2006	Medical procedure	1.0 South African bush elephant 928 continues to receive/consume topical and oral Rx BID 100%. Health Status: Center of R/eye remains smooth, white/yellow in color, dorsal part of pink area on cornea is turning to a purple/blue color, and ventral part of cornea still appears to be pink. TW/RWR
26 Apr 2006	Medical observation	1.0 African elephant 928 treated with R/eye topical ophthalmic ointment and consumed PerOs Rx 100%. Health Status: Eye is less red, outermost area has a white ring, middle part of cornea is pale blue/grey, animal is holding eye open, seems to have improved vision in the eye. TW/RWR
3 May 2006	Medical observation	1.0 South African bush elephant 928 consumed Rx BID PO and topical ophthalmic ointment applied 100%. Condition is static, not much change this week in appearance and appears to be tearing more. TW/RWR
4 May 2006	Medical observation	1.0 South African bush elephant 928 consumed Rx BID PO and topical ophthalmic ointment applied 100%. Health Status: Vets checked eye and will continue PO sulfa-trim for at least one more week. Vets will evaluate eye for signs of infection before discontinuing this Rx. Staff continues to monitor shape of pupil to determine if permanent scarring has occurred. TW/RWR
6 May 2006	Medical treatment	1.0 South African bush elephant 928 consumed Rx BID PO and topical ophthalmic ointment applied 100%. Health Status: Unreported. TW/RWR
12 May 2006	Medical treatment	Rx Final Dose (1.0 South African bush elephant 928) -> Sulfatrim PerOs BID today (last dose). Rx Continued Day 1 of UFN -> 2 Topicals, BID. Health Status: Vet evaluated R/eye condition and finds the eye is continuing to heal well. TW/RWR
18 May 2006	Medical treatment	Rx Change: 1.0 South African bush elephant 928 R/eye treated with topical atropine and tacrolimus. NOTE: Continues to be treated with topical ophthalmic ointment BID. Health Status: There are no noticeable changes in condition of eye. DF/RWR
22 May 2006	Medical treatment	Health Status Change: 1.0 South African bush elephant 928 R/eye treated with topical Atropine and Tacrolimus, BID. Health Status: There are noticeable changes, eye condition improving. DF/RWR
25 May 2006	Medical observation	1.0 South African bush elephant 928 R/eye continues to be treated. Health Status: It appears that the R/eye, is a little cloudy. DF/RWR
15 Jun 2006	Medical diagnosis	Blood Sample Values: Collection Date 13 Jun 2006 (1.1 Asian elephant 101, Y0M072) and (1.2 South African bush elephant 928, 269, 270) the following results were reported by Vet Department -> 1.2 South African bush elephant 928, 269, 270 blood work is within normal limits. 1.1 Asian elephant 101, Y0M072 have some abnormalities. Male (101) has an elevated creatinine - this value was rechecked on the same sample and was still high - this may indicate a degree of kidney failure (possibly chronic and slowly over last few years) vet will recheck to determine how musth cycle may be effecting the levels. A sample can be submitted to the lab next week; vet service request for keepers to attempt to collect an extra red-top



tube from male (101) depending on his behavior status. Female (Y0M072) is mildly anemic - possibly a mild advancement of something more subtle going on in earlier blood screenings. It is not clear what might be causing the problem, but another female (XM1048) was treated for a similar problem a few years ago. Female (XM1048) did respond well to an equine iron-vitamin supplement added to her grain daily for ~6 months. Prescribed Supplement (0.1 Asian elephant Y0M072) Ad Lib to a mineral-salt blocks (presentation pending input from former area staff). CLM/TW/RWR

21 Jun 2006	Trained Behavior	Conditioning for Semen Collection (1.0 South African bush elephant 928) -> Session: Animal shifted into ERC, responded well to clean-out and a 15 minute stimulation, no erection, but did ridge, shortly thereafter began to defecate and penis retracted. Session was ended. TW/RWR
21 Jun 2006	Medical observation	1.0 South African bush elephant 928 Maxitrol topical ophthalmic ointment applied to R/eye BID, R/eye observed watering again today. TW/RWR
7 Jul 2006	Medical treatment	Rx Change: Day 1 of UFN (1.0 South African bush elephant 928) -> New Rx Maxitrol (antibiotic/steroid) topical ophthalmic ointment applied BID, designed to improve pigment of scar tissue. Discontinued: R/eye Tacrolimus SID. Health Status: Vet examined R/eye, black dot in center of eye may be the pigment changing as blood vessel recedes. TW/RWR
9 Jul 2006	Medical treatment	1.0 South African bush elephant 928 Maxitrol topical ophthalmic ointment applied to R/eye BID. TW/RWR
22 Jul 2006	Medical treatment	1.0 South African bush elephant 928 R/eye treated with Maxitrol BID. DF/RWR
7 Aug 2006	Medical observation	1.0 South African bush elephant 928 L/eye appears clearer, very little cloudiness remains in R/edge of L/eye; white spot still visible. TW/RWR
8 Aug 2006	Trained Behavior	Conditioning for Semen Collection (1.0 South African bush elephant 928) -> Session: Animal secured in ERC for semen collection attempt; unsuccessful. TW/RWR
9 Aug 2006	Medical treatment	Final Application of Rx (1.0 South African bush elephant 928) -> L/eye treated BID; checked by Sr. Vet; monitoring eye condition closely. TW/RWR
23 Aug 2006	Medical observation	1.0 South African bush elephant 928 L/eye appears to be clearing up, R/eye continues to appear cloudy. TW/RWR
26 Aug 2006	Medical diagnosis	Trunk Wash Sample/Annual TB Test Results: Per Metrozoo Vet Dept. = 1.1 Asian elephant 101, Y0M072 -> NEGATIVE for any mycobacterium growth; 1.1 South African bush elephant 928, 269 -> NEGATIVE for any mycobacterium growth; 0.1 South African bush elephant 270 -> Vet is waiting on this result due to lab having problems with contamination with one of the samples. NOTE: Samples undergo a 3 month culture process before they are able to provide the diagnosis. CLM/TW/RWR
19 Sep 2006	Diet	Day 1 of Grain Transition (1.2 South African bush elephant 928, 269, 270) -> Phasing out Mazuri ADF-16 and Mazuri Elephant supplement currently being fed in diet. Taste Testing: Yesterday offered new Mazuri Wild Herbivore Diet again and all consumed 100%; offering again today and then begin transition. TW/RWR
27 Sep 2006	Feeding	Day 8 of Grain Transition/Day 1 of 50:50 (1.2 South African bush elephant 928, 269, 270) -> Phasing out Mazuri ADF-16 and Mazuri Elephant supplement; began 50% Mazuri ADF 16 : 50% Wild Herbivore ratio of diet for 1 week. TW/RWR
1 Oct 2006	Trained Behavior	Conditioning for Semen Collection (1.0 South African bush elephant 928) -> Session: Animal secured and shifted well in PM, rubbed down with deck brush while eating grain in attempt to stimulate an erection, unsuccessful. DF/RWR
10 Oct 2006	Musth Cycle	TGS 3/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
17 Oct 2006	Musth Cycle	TGS 3/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
18 Oct 2006	Diet	Day 30 of Grain Transition (1.2 South African bush elephant 928, 269, 270) -> Weighed approx 1 month after receiving Mazuri Wild Herbivore Diet and all continue to consume 100%; weights were lower for all three animals. TW/RWR
22 Oct 2006	Trained Behavior	Bathing Conditioning (1.0 South African bush elephant 928) -> Session: Animal was nervous laying down with keeper walking along side him; conditioning for bath scrubbing session. Musth Cyce: TGS 0, Urine 0 - bull is behaving as if he is in Musth - tossing debris at keepers, tusking barn doors and moving rapidly at keepers. DF/RWR.
22 Oct 2006	Musth Cycle	TGS 0/Urine 0; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the



		change will be noted. TW/RWR
3 Nov 2006	Note	Data Change: Birth Location changed from <ZIMB MUS> to <ZIMBABWE> per studbook keeper and ISIS Data for this specimen. It is believed that there was an error in ARKS Data Migration from ARKS 3 TO ARKS 4 which changed this mnemonic or an error in data entry. NOTE: Registrar was also at zoo when this specimen was imported by CATSKILL from Africa. RWR  Per ISIS Web Page: ID: 928 [Loxodonta africana africana] South African bush elephant Comment: Location of birth inconsistent with wild or unknown origin of birth... Comment: Birth location conflicts with earlier birth location... Note: Previously recorded taxon differs from your taxon... Warning: Vendor and Recipient disagree on terms of transfer-one indicates a loan... >Your reported birth location: ZIMB MUS >Acquired by: Purchase from CATSKILL on 11 Nov 1981 >You report taxon: Loxodonta africana africana >Previously recorded taxon: Loxodonta africana >Acquired by: Purchase from CATSKILL on 11 Nov 1981 >Terms reported by Vendor (ASHEBORO): Loan Transfer METROZOO on 11 Nov 1981 >Acquired by: Purchase from CATSKILL on 11 Nov 1981 >You report birth at: ZIMB MUS >Originally reported birth at: ZIMBABWE
27 Nov 2006	Musth Cycle	TGS 4/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
27 Dec 2006	Trained Behavior	Volunteer Ejaculation Conditioning (1.0 Asiatic elephant 101; 1.0 South African bush elephant 928) -> Elephant Department staff is initiating a training plan to enable them to collect semen from both male elephants. CONDITIONING SESSION COMPONENTS: Cue = "Drop"; Bridging Stimulus = whistle; Reward = Grain, alfalfa, and whole fruits/banana trees for jackpot reward. SESSION PLAN: A Session Plan was devised with a 10 point bullet list of behavioral cues; subject stimuli; trainer responses to behaviors and a rough guideline to shaping the behavior with an operant conditioning technique. GOAL: To condition specimens to volunteer ejaculation of semen. REASON: Samples for use in artificial insemination, reproductive evaluation and to enhance various extenders in an effort to improve cryopreservation and viability of elephant sperm. The protocols for handling and shipping the semen samples will be from: Wendy K. Kiso, M.N.A.S., Predoctoral Research Fellow, Smithsonian's National Zoological Park and Conservation & Research Center, Indianapolis Zoo, 1200 W. Washington Street, Indianapolis, IN 46222-0309; 317-630-3267; kkiso@indy zoo.com, kisow@sl.edu. TW/TB/RT/RWR
27 Dec 2006	Musth Cycle	TGS 0/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
29 Dec 2006	Musth Cycle	TGS 0/Urine 0; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
30 Dec 2006	Musth Behavior	1.0 South African bush elephant 928 continues to display Musth-like behavior TGS 0/urine 0. NOTE: when a change in musth behavior, temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
2 Jan 2007	Musth Cycle	TGS 0/Urine 0; NOTE: Keepers reported that for the past 2 days no behavior or physical signs of musth, will monitor. When a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR
6 Jan 2007	Musth Cycle	TGS 0/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. RT/RWR
12 Jan 2007	Musth Cycle	TGS 3/Urine B; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. RT/RWR
7 Feb 2007	Musth Cycle	TGS 0/Urine A; NOTE: when a change in musth temporal gland secretion or urine dribble occurs the change will be noted. TW/RWR



Taxonomic name: *Loxodonta africana africana*

Family: Elephantidae

Common name: South African bush elephant

Order: Proboscidea

**Current information**

Sex:	Female	Sire ID:	WILD at BOTSWANA
Birth type:	Wild Born	Dam ID:	WILD at BOTSWANA
Birth Location:	BOTSWANA	Rearing:	Parent
Birthdate-Age:	- 1976 - ~30Y	Hybrid:	Not a hybrid
Time since last Acq: 28Y,2M,20D as of report end date			

<u>Date in</u>	<u>Acquisition - Vendor/local Id</u>	<u>Holder</u>	<u>Disposition - Recipient/local Id</u>	<u>Date out</u>
1 Jan 1979	Purchase from CATSKILL	METROZOO / 269		

<u>Date</u>	<u>Type</u>	<u>Value</u>	<u>Units</u>	<u>Comments</u>
26 Jan 2005	live animal weight	9540.0	pound	
13 Jun 2005	live animal weight	9778.0	pound	
19 Aug 2006	live animal weight	9314.0	pound	
21 Sep 2006	live animal weight	9424.0	pound	
18 Oct 2006	live animal weight	9156.0	pound	
22 Nov 2006	live animal weight	8982.0	pound	
18 Dec 2006	live animal weight	9030.0	pound	
1 Mar 2007	shoulder height	9.125	feet	

<u>Date</u>	<u>Note type</u>	<u>Comments</u>
13 Jan 2005	Medical diagnosis	Per Dr. Christine L. Miller, DVM (results of radiograph reviews of elephant feet) -> None of the xrays were recognized to have any signs of infection or other degeneration. Some elephants had variations of what is probably normal for them. CLM/RWR
		This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
16 Feb 2005	Medical diagnosis	Per NZP Conservation and Research Center, 1500 Remount Rd, Front Royal, VA 22630-5972: Results from African Elephant females (269, 270) blood work covering period 12/30/03 - 1/4/05 revealed the following: female (269) P4, Progesterone was a (flat liner) and some elevated Prolactin levels; and female (270) P4 Progesterone was a very low (flat liner). TW/RWR
7 Jun 2005	Medical procedure	Day 1 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing; a blood sample was drawn for herpes testing. TW/RWR
9 Jun 2005	Medical procedure	Day 3 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing. TW/RWR
15 Jun 2005	Research Sample	Per AZA "Guidelines for comprehensive elephant health monitoring program" (March, 2005) the "minimum database" includes serologic testing for elephant herpes virus. Serum samples were collected today for shipment to: Laura Richman, National Zoo, Dept. of Pathology, in Washington DC. These are viruses carried by some of our captive elephants, that have resulted in the death of some animals, especially young calves. The results may be used in helping to assess risk factors when breeding recommendations are made for captive populations. CLM/RWR
		This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
20 Jun 2005	Medical diagnosis	Per Janine Brown, Research Physiologist, NZP Conservation and Research Center, 1500 Remount Rd, Front Royal, VA 22630-5972: Results from blood samples show that this female continues to flat line for progesterone levels and is not cycling. TW/RWR
27 Sep 2005	Medical procedure	1.2 African elephants (928, 269, 270) blood drawn, fecal sample collected. Reason: Unreported. DF/RWR
12 Nov 2005	Adult/adult behavior	During 3:00 pm Keeper Talk female African Elephant (269) charged at female African Elephant (270) and pushed her hindquarters with her tusks. Female African Elephant (270) trumpeted and urinated; no injuries were observed. TW/RWR
22 Nov 2005	Research Sample	Tail Hair Samples Collected from -> 1.2 African Elephant 928, 269, 270 and 1.1 Asian Elephant 101,



Date	Category	Description
		YOM072 for use by US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory, 1490 East Main Street, Ashland Oregon 97520. TW/RWR
30 Nov 2005	Medical diagnosis	0.1 African Elephant 269 vets evaluated mass (papiloma) in vaginal opening. Will discuss treatment plan later. TW/RWR
22 Dec 2005	Medical observation	0.1 African Elephant 269 L/eye appears watery, no visible injury. 0.1 African Elephant 270 very stiff on R/fore ankle in AM, walking without bending it, improved by afternoon. DF/RWR
23 Dec 2005	Medical observation	0.1 South African bush elephant 269 L/eye still a bit watery. DF/RWR
14 Jan 2006	Medical diagnosis	Medical Diagnosis (0.1 South African bush elephant 269) -> Per Metrozoo Vet Department NW ZooPath provided the histopathology results from vaginal tissue sample. DIAGNOSED: Necrotic, consistent with a papiloma/fibromatous polyp, no health issue at this time. PLAN: Will continue to condition animal for routine exam of area and possible surgical removal of the remaining mass. TW/RWR
18 Jan 2006	Medical observation	0.1 South African bush elephant 269 a dime sized inflamed, discolored lesion on L/leg near rectum; vet checked. Treatment: wound washed and Betadine applied, monitoring for changes. DF/RWR
20 Jan 2006	Medical treatment	Prescribed Rx (0.1 South African bush elephant 269) -> Hot compresses and Ichthamol cream applied SID UFN; Reason: abscess on L/side of rump appears larger, red and open. DF/RWR
2 Feb 2006	Medical treatment	0.1 South African bush elephant 269 hot pack treatment discontinued, Rx of flushing w/ povidine-iodine will continue BID UFN. If pus is observed, area becomes larger or inflamed, vets to be notified, and may reinstate hot pack treatment. TW/RWR
3 Feb 2006	Medical observation	0.1 South African bush elephant 269 lesion on L/rump continues to be pink, a bit red in center and no pus observed; Rx: Rinsed and treated with povidine-iodine. TW/RWR
4 Feb 2006	Medical observation	0.1 South African bush elephant 269 wound on rump cleaned BID, some pus observed in AM, in PM center of wound red, ~ 1" in diameter at this time. TW/RWR
6 Feb 2006	Medical observation	0.1 South African bush elephant 269 wound treated and looks good. NOTE: No further notes will be entered unless there is a change in treatment or status of lesion. TW/RWR
11 Feb 2006	Medical treatment	0.1 South African bush elephant 269 wound on rump treated w/betadine, continues to decrease in size. NOTE: No further notes will be entered unless there is a change in treatment or status of lesion. TW/RWR
16 Feb 2006	Trained Behavior	Desensitvity Conditioning (0.1 South African bush elephant 269) -> Shifted into ERD to manipulate body parts in preparation for future surgery (local anesthesia) to remove a vaginal mass. STATUS: Animal did very well, vets present palpation and manipulation of vaginal area accomplished. Wound on rump also treated. TW/RWR
17 Feb 2006	Medical observation	0.1 South African bush elephant 269 wound is healing well; Betadine treatment discontinued today per vets. TW/RWR
10 Mar 2006	Trained Behavior	Desensitvity Conditioning (0.1 South African bush elephant 269) -> Shifted Into ERD secured for polup exam by vet. STATUS: Animal did very well. DF/RWR
16 Mar 2006	Trained Behavior	Desensitvity Conditioning (0.1 South African bush elephant 269) -> Shifted into ERD secured for polup exam by vet. STATUS: Vets and staff worked animal, manipulated vaginal area, examined polyps, and injected saline into polyp area, waited 5 minutes and went back to repeat exam. Animal responded very well. TW/RWR
28 Mar 2006	Medical procedure	Medical Procedure (0.1 South African bush elephant 269) -> Animal secured in ERD for procedure. Vaginal area cleaned/Local injectable topical anesthetic administered. Vaginal polyp removed with a scalpel and antibiotic cream was applied to site. Tissue sent to lab for analysis. Post Procedure: Animal released to exhibit; Keepers will monitor lesion. RT/RWR
29 Mar 2006	Medical observation	0.1 South African bush elephant 269 post surgery observations of vaginal area show no signs of swelling or bleeding. No sensitivities observed when urinating. TW/RWR
1 Apr 2006	Medical procedure	0.1 South African bush elephant 269 Vets checked vaginal surgery site which continues to appear to be healing well. No swelling/discharge observed. TW/RWR
4 Apr 2006	Medical procedure	0.1 South African bush elephant 269 Vets checked vaginal surgery site, wound has decreased in size, pink tissue growing in around edges of wound and a whitish-yellow scab is present. No swelling or new growths observed at surgical site, will evaluate again in 1 month unless there are changes. TW/RWR
4 Apr 2006	Medical diagnosis	Tissue Sample Diagnosis -> Per Metrozoo vet department (Unknown Lab) Diagnosis/Histopath of masses removed = fibrous papiloma. TW/RWR



9 May 2006	Medical observation	0.1 South African bush elephant 269 vets evaluated R/rear P1 digit toenail. Vets recommend keeping the depression open and allow nail to grow out, monitoring for changes. TW/RWR
15 Jun 2006	Medical diagnosis	Blood Sample Values: Collection Date 13 Jun 2006 (1.1 Asian elephant 101, Y0M072) and (1.2 South African bush elephant 928, 269, 270) the following results were reported by Vet Department -> 1.2 South African bush elephant 928, 269, 270 blood work is within normal limits. 1.1 Asian elephant 101, Y0M072 have some abnormalities. Male (101) has an elevated creatinine - this value was rechecked on the same sample and was still high - this may indicate a degree of kidney failure (possibly chronic and slowly over last few years) vet will recheck to determine how musth cycle may be effecting the levels. A sample can be submitted to the lab next week; vet service request for keepers to attempt to collect an extra red-top tube from male (101) depending on his behavior status. Female (Y0M072) is mildly anemic - possibly a mild advancement of something more subtle going on in earlier blood screenings. It is not clear what might be causing the problem, but another female (XM1048) was treated for a similar problem a few years ago. Female (XM1048) did respond well to an equine iron-vitamin supplement added to her grain daily for ~6 months. Prescribed Supplement (0.1 Asian elephant Y0M072) Ad Lib to a mineral-salt blocks (presentation pending input from former area staff). CLM/TW/RWR
15 Aug 2006	Trained Behavior	<p>Animal: 0.1 Asian Elephant "Peggy" (269) Trainer: Tarah Bedrossian Staff Required: Two qualified Elephant Keepers Location: Asian elephant barn Time: Shifting times, or whenever possible Date Started: 15 Aug 2006 Date Completed: Materials Required:</p> <ul style="list-style-type: none"><li>" Target pole/Target (buoy)</li><li>" Bite sized treats (chopped produce, grain, cereal, etc)</li><li>" Whistle</li><li>" Treat container, belted on waist</li></ul> <p>Behavior to be established, goal (reason) for behavior: Target: The elephant will touch its forehead to a designated target (buoy or fist). The "Target" can be beneficial for shifting, directing the elephant, and body positioning. The present command "steady" will be used if the elephant needs to hold its forehead on the target. Training Plan:</p> <ol style="list-style-type: none"><li>1. The elephant to be trained, must first be conditioned to the bridge (in this case a dog whistle). The beginning process will require several short bridge and reward sessions. The trainer will place the reward into the elephant's trunk, and bridge the instant the elephant places the reward into its mouth. After several bridge and reward sessions the elephant will begin to relate the sound of the whistle, to receiving a food reward.</li><li>2. Next, the elephant will need to learn to move toward the target and to become desensitized to touching it's forehead to the target. The trainer will bridge and reward as the animal moves toward the target (buoy). The elephant will be asked to "move up, Target" until the forehead makes contact with the target. The instant the forehead and target touch, the trainer will bridge, jackpot reward, and say "good, Target". Similar sessions should take place until the animal responds to the command "Target" by moving and positioning so that its forehead touches the target.</li><li>3. Once the elephant understands the new command "target", other pre-existing behaviors like "foot" can be directed using the target. The trainer will use a command, for instance, "foot" while holding the target in a position that the top of the elephant's foot will touch the target at a desired height. The trainer will bridge and reward each time the foot touches the target. The target can be held by a foot care bar or into a stall, safely, to condition the elephant to move its foot toward the target.</li><li>4. The trainer will continue to use the target buoy as a visual cue to position every foot. The target does not have to touch any particular spot on the foot, but should be positioned so that the animal can move its leg/foot toward the target. In the beginning steps the top of the foot is used since the placement and chances of foot and target contact are most probable. The next step would be to present the target to the side of a foot, say "foot" and the elephant should move its foot toward the target until the foot and target touch. The trainer should be careful to position the target small distances at a time. If the elephant does not attempt to move the foot towards the target, the trainer should return to step 4, until the animal has a good understanding. Keep in mind the elephants are currently trained to move away from a keeper's</li></ol>



ankus, and moving toward a target buoy may be challenging. The trainer should be sure the animal is responding consistently to the command being asked before moving to the next step. Sessions should be short, to maintain interest and compliance.

5. Once the elephant responds consistently to the commands, and moves its feet toward the target, the elephant and trainer are ready for the next step. For the behavior "come-in-tight": the elephant will be positioned so that when asked "come-in-tight" the animal's side will come into contact with the target. The trainer will bridge the instant the side touches the target. The trainer will continue to ask "come-in-tight" in different locations. The elephant should not remove its side from the target until told "alright". The trainer should use the command "steady" to keep the elephant from moving its side away from the target. In the beginning the trainer should bridge and reward as the animal holds its position (side touching target). If the animal pulls away the trainer can say "come-in-tight" again, the elephant should reposition so that its side touches the target again. The first sessions should not require the elephant to hold in position too long. The trainer should always aim to have a successful training session.

Once the animal appears to be responding well to the training sessions and is excited to participate, the frequency of rewards can decrease. TW/TB/RWR

26 Aug 2006	Medical diagnosis	Trunk Wash Sample/Annual TB Test Results: Per Metrozoo Vet Dept. = 1.1 Asian elephant 101, Y0M072 -> NEGATIVE for any mycobacterium growth; 1.1 South African bush elephant 928, 269 -> NEGATIVE for any mycobacterium growth; 0.1 South African bush elephant 270 -> Vet is waiting on this result due to lab having problems with contamination with one of the samples. NOTE: Samples undergo a 3 month culture process before they are able to provide the diagnosis. CLM/TW/RWR
14 Sep 2006	Medical observation	0.1 South African bush elephant 269 Keepers expressed a blister that is assumed to be an ingrown or infected hair follicle. After manipulating the swollen lump this morning a teaspoon of yellow-white pus came out and the skin covering the hole sloughed off. Keepers rinsed the lesion with tap water, the elephant didn't seem to be tender in the area and the lesion was not warm to the touch. The lesion is located on her trunk under L/tusk (a digital photo is on file). TB/TW/RWR
19 Sep 2006	Diet	Day 1 of Grain Transition (1.2 South African bush elephant 928, 269, 270) -> Phasing out Mazuri ADF-16 and Mazuri Elephant supplement currently being fed in diet. Taste Testing: Yesterday offered new Mazuri Wild Herbivore Diet again and all consumed 100%; offering again today and then begin transition. TW/RWR
27 Sep 2006	Feeding	Day 8 of Grain Transition/Day 1 of 50:50 (1.2 South African bush elephant 928, 269, 270) -> Phasing out Mazuri ADF-16 and Mazuri Elephant supplement; began 50% Mazuri ADF 16 : 50% Wild Herbivore ratio of diet for 1 week. TW/RWR
1 Oct 2006	Adult/adult behavior	0.1 South African bush elephant 269 observed with head held high and ears extended when 0.1 South African bush elephant 270 shifted past; cause of behavior unknown. DF/RWR
2 Oct 2006	Aggression	0.2 South African bush elephant 269, 270 observed female 269 behaving aggressively towards female 270 at Keeper Talk. Female 269 ran over to female 270, using her head to push 270 on the rump in order to steal browse. No injuries observed and 270 is observed being submissive toward 269. TW/RWR
2 Oct 2006	Medical observation	0.1 South African bush elephant 269 observed to have a 3 inch long laceration to the R/temporal gland; lesion appears to be shallow and was observed bleeding. TW/RWR
17 Oct 2006	Medical diagnosis	Reproductive Evaluation/Blood Samples (0.1 South African bush elephant 269) -> Per Janine Brown, Research Physiologist [Conservation & Research Center, 1500 Remount Rd, Front Royal, VA 22630] re-check of reproductive cycle = not cycling, flat line for progesterone levels. TW/RWR
18 Oct 2006	Diet	Day 30 of Grain Transition (1.2 South African bush elephant 928, 269, 270) -> Weighed approx 1 month after receiving Mazuri Wild Herbivore Diet and all continue to consume 100%; weights were lower for all three animals. TW/RWR
17 Mar 2007	Foot management	0.1 South African bush elephant 269 trimmed and filed rear foot pads and nails; Condition: Unreported. TW/RWR



Taxonomic name: *Loxodonta africana africana*  
Common name: South African bush elephant

Family: Elephantidae  
Order: Proboscidea

**Current information**

Sex: Female Sire ID: WILD at BOTSWANA  
 Birth type: Wild Born Dam ID: WILD at BOTSWANA  
 Birth Location: BOTSWANA Rearing: Parent  
 Birthdate-Age: ~ 1976 - ~30Y Hybrid: Not a hybrid  
 Time since last Acq: 28Y,2M,20D as of report end date

<u>Date in</u>	<u>Acquisition - Vendor/local Id</u>	<u>Holder</u>	<u>Disposition - Recipient/local Id</u>	<u>Date out</u>
1 Jan 1979	Purchase from CATSKILL / UNK	METROZOO / 270		

<u>Date</u>	<u>Type</u>	<u>Value</u>	<u>Units</u>	<u>Comments</u>
26 Jan 2005	live animal weight	8150.0	pound	
13 Jun 2005	live animal weight	8216.0	pound	
19 Aug 2006	live animal weight	8142.0	pound	
21 Sep 2006	live animal weight	8278.0	pound	
18 Oct 2006	live animal weight	8212.0	pound	
22 Nov 2006	live animal weight	8094.0	pound	
18 Dec 2006	live animal weight	8082.0	pound	
1 Mar 2007	shoulder height	8.458	feet	

<u>Date</u>	<u>Note type</u>	<u>Comments</u>
13 Jan 2005	Medical diagnosis	Per Dr. Christine L. Miller, DVM (results of radiograph reviews of elephant feet) -> None of the xrays were recognized to have any signs of infection or other degeneration. Some elephants had variations of what is probably normal for them. CLM/RWR  This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
16 Feb 2005	Medical diagnosis	Per NZP Conservation and Research Center, 1500 Remount Rd, Front Royal, VA 22630-5972: Results from African Elephant females (269, 270) blood work covering period 12/30/03 - 1/4/05 revealed the following: female (269) P4, Progesterone was a (flat liner) and some elevated Prolactin levels; and female (270) P4 Progesterone was a very low (flat liner). TW/RWR
7 Jun 2005	Medical procedure	Day 1 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing; a blood sample was drawn for herpes testing. TW/RWR
9 Jun 2005	Medical procedure	Day 3 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing. TW/RWR
15 Jun 2005	Research Sample	Per AZA "Guidelines for comprehensive elephant health monitoring program" (March, 2005) the "minimum database" includes serologic testing for elephant herpes virus. Serum samples were collected today for shipment to: Laura Richman, National Zoo, Dept. of Pathology, in Washington DC. These are viruses carried by some of our captive elephants, that have resulted in the death of some animals, especially young calves. The results may be used in helping to assess risk factors when breeding recommendations are made for captive populations. CLM/RWR  This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
27 Sep 2005	Medical procedure	1.2 African elephants (928, 269, 270) blood drawn, fecal sample collected. Reason: Unreported. DF/RWR
12 Nov 2005	Adult/adult behavior	During 3:00 pm Keeper Talk female African Elephant (269) charged at female African Elephant (270) and pushed her hindquarters with her tusks. Female African Elephant (270) trumpeted and urinated; no injuries were observed. TW/RWR
22 Nov 2005	Research Sample	Tail Hair Samples Collected from -> 1.2 African Elephant 928, 269, 270 and 1.1 Asian Elephant 101, Y0M072 for use by US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory, 1490 East Main Street, Ashland Oregon 97520. TW/RWR
22 Dec 2005	Medical observation	0.1 South African bush elephant 269 L/eye appears watery, no visible injury. 0.1 African Elephant 270



very stiff on R/fore ankle in AM, walking without bending it, improved by afternoon. DF/RWR

15 Jun 2006	Medical diagnosis	<p>Blood Sample Values: Collection Date 13 Jun 2006 (1.1 Asian elephant 101, Y0M072) and (1.2 South African bush elephant 928, 269, 270) the following results were reported by Vet Department -&gt; 1.2 South African bush elephant 928, 269, 270 blood work is within normal limits. 1.1 Asian elephant 101, Y0M072 have some abnormalities. Male (101) has an elevated creatinine - this value was rechecked on the same sample and was still high - this may indicate a degree of kidney failure (possibly chronic and slowly over last few years) vet will recheck to determine how musth cycle may be effecting the levels. A sample can be submitted to the lab next week; vet service request for keepers to attempt to collect an extra red-top tube from male (101) depending on his behavior status. Female (Y0M072) is mildly anemic - possibly a mild advancement of something more subtle going on in earlier blood screenings. It is not clear what might be causing the problem, but another female (XM1048) was treated for a similar problem a few years ago. Female (XM1048) did respond well to an equine iron-vitamin supplement added to her grain daily for ~6 months. Prescribed Supplement (0.1 Asian elephant Y0M072) Ad Lib to a mineral-salt blocks (presentation pending input from former area staff). CLM/TW/RWR</p>
10 Jul 2006	Medical observation	<p>0.1 South African bush elephant 269 has 3 small tubular growths on vulva, visible when animal is laying on her side. TW/RWR</p>
13 Aug 2006	Trained Behavior	<p>Animal: 0.1 Asian Elephant "Mable" (270) Trainer: Tarah Bedrossian Staff Required: Two qualified Elephant Keepers Location: Asian elephant barn Time: Shifting times, or whenever possible Date Started: 6 Aug 2006 Date Completed: 13 Aug 2006 Materials Required: " Target pole/Target (buoy) " Bite sized treats (chopped produce, grain, cereal, etc) " Whistle " Treat container, belted on waist</p> <p>Behavior to be established, goal (reason) for behavior: Target: The elephant will touch its forehead to a designated target (buoy or fist). The "Target" can be beneficial for shifting, directing the elephant, and body positioning. The present command "steady" will be used if the elephant needs to hold its forehead on the target.</p> <p>Training Plan:</p> <ol style="list-style-type: none"><li>1. The elephant to be trained, must first be conditioned to the bridge (in this case a dog whistle). The beginning process will require several short bridge and reward sessions. The trainer will place the reward into the elephant's trunk, and bridge the instant the elephant places the reward into its mouth. After several bridge and reward sessions the elephant will begin to relate the sound of the whistle, to receiving a food reward.</li><li>2. Next, the elephant will need to learn to move toward the target and to become desensitized to touching it's forehead to the target. The trainer will bridge and reward as the animal moves toward the target (buoy). The elephant will be asked to "move up, Target" until the forehead makes contact with the target. The instant the forehead and target touch, the trainer will bridge, jackpot reward, and say "good, Target". Similar sessions should take place until the animal responds to the command "Target" by moving and positioning so that its forehead touches the target.</li><li>3. Once the elephant understands the new command "target", other pre-existing behaviors like "foot" can be directed using the target. The trainer will use a command, for instance, "foot" while holding the target in a position that the top of the elephant's foot will touch the target at a desired height. The trainer will bridge and reward each time the foot touches the target. The target can be held by a foot care bar or into a stall, safely, to condition the elephant to move its foot toward the target.</li><li>4. The trainer will continue to use the target buoy as a visual cue to position every foot. The target does not have to touch any particular spot on the foot, but should be positioned so that the animal can move its leg/foot toward the target. In the beginning steps the top of the foot is used since the placement and chances of foot and target contact are most probable. The next step would be to present the target to the side of a foot, say "foot" and the elephant should move its foot toward the target until the foot and target touch. The trainer should be careful to position the target small distances at a time. If the elephant does</li></ol>



not attempt to move the foot towards the target, the trainer should return to step 4, until the animal has a good understanding. Keep in mind the elephants are currently trained to move away from a keeper's ankus, and moving toward a target buoy may be challenging. The trainer should be sure the animal is responding consistently to the command being asked before moving to the next step. Sessions should be short, to maintain interest and compliance.

5. Once the elephant responds consistently to the commands, and moves its feet toward the target, the elephant and trainer are ready for the next step. For the behavior "come-in-tight": the elephant will be positioned so that when asked "come-in-tight" the animal's side will come into contact with the target. The trainer will bridge the instant the side touches the target. The trainer will continue to ask "come-in-tight" in different locations. The elephant should not remove its side from the target until told "alright". The trainer should use the command "steady" to keep the elephant from moving its side away from the target. In the beginning the trainer should bridge and reward as the animal holds its position (side touching target). If the animal pulls away the trainer can say "come-in-tight" again, the elephant should reposition so that its side touches the target again. The first sessions should not require the elephant to hold in position too long. The trainer should always aim to have a successful training session.

Once the animal appears to be responding well to the training sessions and is excited to participate, the frequency of rewards can decrease. TW/TB/RWR

26 Aug 2006	Medical diagnosis	Trunk Wash Sample/Annual TB Test Results: Per Metrozoo Vet Dept. = 1.1 Asian elephant 101, Y0M072 -> NEGATIVE for any mycobacterium growth; 1.1 South African bush elephant 928, 269 -> NEGATIVE for any mycobacterium growth; 0.1 South African bush elephant 270 -> Vet is waiting on this result due to lab having problems with contamination with one of the samples. NOTE: Samples undergo a 3 month culture process before they are able to provide the diagnosis. CLM/TW/RWR
5 Sep 2006	Medical observation	0.1 South African bush elephant 270 Keepers observe a small 2" scab over pink area of skin on lower backside of R/ear. TW/RWR
19 Sep 2006	Diet	Day 1 of Grain Transition (1.2 South African bush elephant 928, 269, 270) -> Phasing out Mazuri ADF-16 and Mazuri Elephant supplement currently being fed in diet. Taste Testing: Yesterday offered new Mazuri Wild Herbivore Diet again and all consumed 100%; offering again today and then begin transition. TW/RWR
27 Sep 2006	Feeding	Day 8 of Grain Transition/Day 1 of 50:50 (1.2 South African bush elephant 928, 269, 270) -> Phasing out Mazuri ADF-16 and Mazuri Elephant supplement; began 50% Mazuri ADF 16 : 50% Wild Herbivore ratio of diet for 1 week. TW/RWR
1 Oct 2006	Adult/adult behavior	0.1 South African bush elephant 269 observed with head held high and ears extended when 0.1 South African bush elephant 270 shifted past; cause of behavior unknown. DF/RWR
2 Oct 2006	Aggression	0.2 South African bush elephant 269, 270 observed female 269 behaving aggressively towards female 270 at Keeper Talk. Female 269 ran over to female 270, using her head to push 270 on the rump in order to steal browse. No injuries observed and 270 is observed being submissive toward 269. TW/RWR
6 Oct 2006	Medical diagnosis	TB Test Results (0.1 South African bush elephant 270) -> Per Metrozoo Vet one of the trunk wash samples grew a mycobacterium species that is NOT considered a pathogen (atypical); no pathogenic mycobacteria were found. CLM/TW/RWR
18 Oct 2006	Diet	Day 30 of Grain Transition (1.2 South African bush elephant 928, 269, 270) -> Weighed approx 1 month after receiving Mazuri Wild Herbivore Diet and all continue to consume 100%; weights were lower for all three animals. TW/RWR



Taxonomic name: *Elephas maximus*

Family: Elephantidae

Common name: Asiatic elephant

Order: Proboscidea

**Current information**

Sex:	Female	Sire ID:	UNK at Unknown Location
Birth type:	Wild Born	Dam ID:	UNK at Unknown Location
Birth Location:	INDIA	Rearing:	Unknown
Birthdate-Age:	~ 1969 - 38Y,2M,19D +/-1 Yr.	Hybrid:	Not a hybrid
Time since last Acq:	6Y,3M,16D as of report end date		

<u>Date in</u>	<u>Acquisition - Vendor/local Id</u>	<u>Holder</u>	<u>Disposition - Recipient/local Id</u>	<u>Date out</u>
5 Dec 2000	Loan In from COMMERFRD / NELLIE	METROZOO / Y0M072		

<u>Date</u>	<u>Type</u>	<u>Value</u>	<u>Units</u>	<u>Comments</u>
26 Jan 2005	live animal weight	9340.0	pound	
17 May 2005	live animal weight	8760.0	pound	
12 Jun 2005	live animal weight	9212.0	pound	
21 Jun 2005	live animal weight	9064.0	pound	
27 Jun 2005	live animal weight	9030.0	pound	
5 Jul 2005	live animal weight	8978.0	pound	
18 Jul 2005	live animal weight	9210.0	pound	
25 Jul 2005	live animal weight	9298.0	pound	
1 Aug 2005	live animal weight	9222.0	pound	
19 Aug 2006	live animal weight	8872.0	pound	
18 Oct 2006	live animal weight	8490.0	pound	
20 Nov 2006	live animal weight	8750.0	pound	
20 Feb 2007	live animal weight	8586.0	pound	
28 Feb 2007	shoulder height	7.92	feet	
20 Mar 2007	live animal weight	8664.0	pound	

<u>Date</u>	<u>Note type</u>	<u>Comments</u>
13 Jan 2005	Medical diagnosis	Per Dr. Christine L. Miller, DVM (results of radiograph reviews of elephant feet) -> None of the xrays were recognized to have any signs of infection or other degeneration. Some elephants had variations of what is probably normal for them. CLM/RWR  This comment was added to the following specimens: 101, 269, 270, 928, Y0M072.
10 May 2005	Medical observation	Animal is observed to pass loose stool; refused to consume 100% of grain in diet and consumed very little hay. Fecal output is reduced. TW/RWR
11 May 2005	Medical observation	Observed to be presenting lethargy, reduced appetite in AM and no longer consuming any food. Appears to be in discomfort with head pressing in stalls, leaning against stalls, moving much slower than normal and holding mouth open. Procedures Performed: Animal was offered bran/mineral mixture and produce, but showed no interest. Shifted into ERC, leg chained, checked oral cavity, teeth; rectal body temp (97.6 F), fecal sample temp (98.5 F); blood drawn, urine sample (mid stream), and submitted fecal. Given a bath to aid with comfort and put out on exhibit alone for exercise. Findings: Normal body temps and found no problems in oral cavity. Fecal/blood sample diagnostics (results pending) and urine (results normal). Post Procedure: Will continue to monitor. TW/RWR
11 May 2005	Medical treatment	Medical Treatments (current health issue) -> AM PROCEDURES: Shifted into ERC and given IM injection of 50 ml Banamine in R/rear leg (Day 1). POST PROCEDURE: Animal was shifted onto exhibit after vet checks and procedures. AM BEHAVIOR: Observed to be very inactive throughout the day, spending most of the day near the hotwire and holding mouth open. Animal was observed to go down on one leg in PM. CONSUMPTION: Refused to consume hay and only consumed a few banana plants all day. PM PROCEDURES: Vet checked at closeout. Offered hay, grain, bran/mineral oil and water, observed for 30 minutes; refused to consume any food items. PM BEHAVIOR: Observed leaning up



		against bars and appears to continue to be in discomfort. Will not give access to paddock tonight, housed in Asian Barn overnight. Per Night Keeper: Animal observed lying down a couple times, but got up right away when Keeper entered area. Small amount of feces and urine was passed overnight. Did not appear to consume any hay; did consume very small amount of bran/grain and a minor amount of water overnight. TW/RWR
12 May 2005	Medical observation	Medical Observations (current health issue) -> AM CONSUMPTION: Animal refused to consume hay and grain overnight; consumed very little water. Refused to consume browse, hay, bran/grain during the day; consumed 30 gallons of water/Gatorade with mineral oil. AM BEHAVIOR: Defecated 4 times and urinated once; feces appeared dry with sand and stones in at least one bowel movement. Treatment: Given IM injection of 40 ml Banamine in L/rear leg (In ERC); Put on exhibit for exercise for approximately 4 hours. Findings: Blood test results were WNL. Overnight Management: Will be housed inside again overnight; Night Keeper to check frequently. TW/RWR
13 May 2005	Medical treatment	Medical Treatments (current health issue) -> AM CONSUMPTION: Offered Gatorade/mineral oil in a bucket and consumed ~12 gallons. A urine sample was collected (WNL) and given IM injection of 50 ml Banamine in R/rear leg (Day 2). AM BEHAVIOR: Animal defecated and urinated once in AM. Appears to be a little more responsive to commands and showing less discomfort this AM. Placed in ERC, asked to lay down, did so without hesitation or problem, given a bath. Put on exhibit for exercise until this PM. Brought off exhibit at 3 PM. PM CONSUMPTION: Did not eat any hay on exhibit. After ERC procedure; Offered hay, bran mixed with sweet feed. Observed for 30 minutes animal consumed a small small amount of hay, no real interest in bran/sweet feed mixture, and did not drink any water. Offered Gatorade in bucket several times throughout the day, but not as interested as yesterday, consumed 23 gallons. TREATMENTS: Placed in ERC and leg chained. Given injection of 50 ml Banamine in R/rear leg; performed a rectal clean out and water enema. POST PROCEDURES: Released from ERC into stall for the night. Did defecate and urinate in the PM. Night Keeper will check throughout night. TW/RWR
14 May 2005	Medical treatment	Day 3 of 3 -> Last Treatment IM injection of 50 ml Banamine in R/rear leg; discontinued today due to improved attitude and appetite. TW/RWR
16 May 2005	Medical treatment	Day 1 -> Rx: psyllium (natural fiber laxative) Per Os, 56g SID for (3) days. TW/RWR
7 Jun 2005	Medical procedure	Day 1 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing; a blood sample was drawn for herpes testing. TW/RWR
9 Jun 2005	Medical procedure	Day 3 of 3 (2.3 elephants 101, 928, Y0M072, 269, 270) -> Trunk wash for TB testing. TW/RWR
15 Jun 2005	Research Sample	Per AZA "Guidelines for comprehensive elephant health monitoring program" (March, 2005) the "minimum database" includes serologic testing for elephant herpes virus. Serum samples were collected today for shipment to: Laura Richman, National Zoo, Dept. of Pathology, in Washington DC. These are viruses carried by some of our captive elephants, that have resulted in the death of some animals, especially young calves. The results may be used in helping to assess risk factors when breeding recommendations are made for captive populations. CLM/RWR
20 Jun 2005	Diet	This comment was added to the following specimens: 101, 269, 270, 928, Y0M072. Current Diet Each (1.1 #101, Y0M072) -> AM Diet: 1 bale coastal hay (increase as needed); 20.0#+ browse from approved browse list. PM Diet: (101) -> 14.5# carrots, 10.0# each Manna Pro Elephant Supplement and Mazuri ADF-16 Regional; 2 bales coastal hay (increase as needed). (Y0M072) -> 14.5# carrots, 8.0# Manna Pro Elephant Supplement; 1 bale coastal hay. REASON FOR CHANGE: Female (Y0M072) diet item Manna Pro Elephant Supplement was reduced by 2.0# due to weight management concerns. RT/RWR
21 Jun 2005	Reproductive behavior	Observed male (101) mounting female (Y0M072); on this day no copulation was observed. TW/RWR
23 Jun 2005	Medical diagnosis	Per Erin Latimer, Smithsonian/NZP, Dept. of Pathology -> Nellie (Y0M072) and Dalip (101) both had low results in the ELISA, so it looks like they are not producing EEHV antibodies at this time. TW/RWR
29 Jun 2005	Animal Management	Situation: At 7:00 pm this animal was observed to be 'inside' the tree protector barrier. Staff was called in to remove her and shift her into the barn. Management Outcome: Animal will be kept inside the Asian Elephant Barn until the tree protector improvement/repair project is completed [projected date: 1 July 2005]. TW/RWR
12 Jul 2005	Breeding encounter	This morning male (101) was observed to pursue and attempted (7) successive, rapid mountings of female (Y0M072); female was observed to stand for male at times and retreated at other times. Behaviors Exhibited: Trumpeting, squeaking, and roaring vocalizations were heard. One successful



		copulation was observed at 4:15 pm, penetration and ejaculation confirmed by another Mammal Keeper (A. Neill, Giraffe Area). TW/RT/RWR
12 Jul 2005	Animal Management	Night 1 -> Animal will be given access to paddock overnight with new hotwire and rock ring tree protector. No problems reported on by Night Keeper overnight. Reason for Change: New shade tree installed; rock ring and associated hotwire protector installed around tree 5 July 2005 [previous projected date of completion: 1 July 2005]. TW/RWR
13 Jul 2005	Adult/adult behavior	Unusual Behavior -> Male (101) and female (Y0M072) refusal to shift into the Asian Elephant Barn at the end of the day. This abnormal behavior exhibited by 1.1 (101, Y0M072) was due to male (101) being in musth. RT/RWR
1 Aug 2005	Weight/Length	Female (Y2M072) appears to have stabilized since diet decrease; weekly weights are being discontinued changing to monthly weights. TW/RWR
4 Aug 2005	Medical treatment	0.1 Asian Elephant Y0M072 Vet checked L front cuticles. Trimmed skin and cuticles that are peeling. Vita-hoof to be applied 1X daily to all nails and cuticles UFN. TW/RWR
1 Sep 2005	Medical treatment	0.1 Asian Elephant Y0M072 vet checked P2 on L front foot, cuticle pulled back and swollen. Vet opened a hole into nail face to the bottom of nail. Keepers to keep clean and soak foot in dilute novalasan BID for 10 minutes UFN. Kopertox to be applied after each soak. TW/RWR
5 Sep 2005	Medical observation	Day 5 of soaking foot -> Areas between P1/P2 and P2/P3 on L/fore foot are soft and exposed. TW/RWR
9 Sep 2005	Medical treatment	0.1 Asian Elephant Y0M072 vet checked L/fore foot, foot soaks have been discontinued. Kopertox will continue UFN. TW/RWR
22 Sep 2005	Medical observation	0.1 Asian Elephant Y0M072 consumed very little hay overnight, consumed browse, grain and produce well overnight. Appetite depressed today; shavings in feces. Will monitor appetite and fecal output tomorrow. If no improvement, will offer bran. New crack in L/fore P2, 2 inches long and 1/8 inch from cuticle, kopertox applied. TW/RWR
23 Sep 2005	Medical observation	0.1 Asian Elephant Y0M072 slow to shift in AM, consumed very little hay and 50% of browse overnight. Defecated 2 times overnight; appeared dry with shavings in the feces. Today consumed 10.0# of bran, 100% of produce and grain; no observations of hay consumption all day- monitoring condition. TW/RWR
24 Sep 2005	Medical observation	0.1 Asian Elephant Y0M072 behavior and appetite much improved. Consumed 100% of 10 lbs bran offered today. No drainage observed from R/temporal gland which was blocked with brown fluid yesterday. TW/RWR
2 Oct 2005	Medical observation	0.1 Asian Elephant Y0M072 with soft stool; no observable hay consumption overnight. DF/RWR
3 Oct 2005	Medical observation	0.1 Asian elephant Y0M072 consumed 100% of diet overnight; 100% of grain today; observed eating hay throughout the day; defecated overnight twice with some not well formed. DF/RWR
4 Oct 2005	Medical observation	0.1 Asian Elephant Y0M072 consumed 100% of diet overnight and during the day; feces still soft; normal output. DF/RWR
6 Oct 2005	Medical observation	0.1 Asian Elephant Y0M072 this is the second day in a row animal didn't consume 100% of hay overnight; consumed 25%. DF/RWR
7 Oct 2005	Feeding	0.1 Asian Elephant Y0M072 consumed 90% of hay overnight. DF/RWR
9 Oct 2005	Feeding	0.1 Asian Elephant Y0M072 consumed ~85% of hay offered overnight. DF/RWR
10 Oct 2005	Feeding	1.1 Asian Elephant 101, Y0M072 for undetermined reason, both are eating less hay than normal. Will continue to adjust hay and monitor. TW/RWR
15 Oct 2005	Medical observation	0.1 Asian elephant Y0M072 consumed ~30-40% of hay overnight; not observed eating hay today; eating 100% of produce and browse; consumed 80% of grain today; urinating and defecating normally. DF/RWR
16 Oct 2005	Medical observation	0.1 Asian elephant Y0M072 overnight consumed ~0-5% Timothy hay; 0% coastal; ~80% browse and 100% carrots. Refused grain during the day; ate 100% coconuts, banana leaves and produce. Two of five piles of feces were soft/not formed from overnight. Responded well to commands, appears alert. DF/RWR
19 Oct 2005	Medical observation	0.1 Asian elephant Y0M070 consuming 100% of diet, animal appears to have resolved any appetite concerns. TW/RWR
22 Nov 2005	Research Sample	Tail Hair Samples Collected from -> 1.2 African Elephant 928, 269, 270 and 1.1 Asian Elephant 101, Y0M072 for use by US Fish and Wildlife, National Forensics Laboratory/Wildlife Crime Laboratory, 1490 East Main Street, Ashland Oregon 97520. TW/RWR



24 Nov 2005	Individual behavior	0.1 Asian elephant Y0M072 overnight made her way into rock ring. Destroyed tree and all hot wire attachments; no injuries observed. Animal was in rock ring area at 8:00 AM check and left around 8:45 AM. TW/RWR
26 Nov 2005	Individual behavior	0.1 Asian elephant Y0M072 pushed metal hotwire pole down overnight. TW/RWR
15 Feb 2006	Foot management	0.1 Asian elephant Y0M072 L/fore foot P3 toenail filed and Kopertox applied. TW/RWR
20 Feb 2006	Aggression	0.1 Asian elephant Y0M072 made 3 short quick head movements against bars toward staff during training session. Incident report to be filed. TW/RWR
1 Mar 2006	Foot management	0.1 Asian elephant Y0M072 vets opened an area under cuticle front Left P2 to connect to a hole that is forming on the bottom of foot. Kopertox applied. TW/RWR
4 Apr 2006	Research Sample	Research Project Samples (0.1 Asian elephant Y0M072) -> Collection began on this date of 2-3 ml of blood, each Tuesday, UFN for a project to develop an ELISA test for Elephant Endotheliotropic Herpes Virus (EEHV) in Asian elephants. Primary Investigator: Erin Latimer, Department of Pathology, Smithsonian National Zoological Park 3001 Connecticut Ave, NW Washington DC 20008. TW/RWR
7 Apr 2006	Individual behavior	0.1 Asian elephant Y0M072 during evening rounds Night Keeper observed animal inside rock ring tree protector. TW/RWR
9 May 2006	Medical procedure	0.1 Asian elephant Y0M072 vets evaluated L/fore foot P2 digit toenail. Finding: Nail appears to be healing well. TW/RWR
18 May 2006	Medical observation	0.1 Asiatic elephant Y0M072 observed to have abrasions on R/ear that are healing but still sensitive to the touch. DF/RWR
15 Jun 2006	Medical diagnosis	Blood Sample Values: Collection Date 13 Jun 2006 (1.1 Asian elephant 101, Y0M072) and (1.2 South African bush elephant 928, 269, 270) the following results were reported by Vet Department -> 1.2 South African bush elephant 928, 269, 270 blood work is within normal limits. 1.1 Asian elephant 101, Y0M072 have some abnormalities. Male (101) has an elevated creatinine - this value was rechecked on the same sample and was still high - this may indicate a degree of kidney failure (possibly chronic and slowly over last few years) vet will recheck to determine how musth cycle may be effecting the levels. A sample can be submitted to the lab next week; vet service request for keepers to attempt to collect an extra red-top tube from male (101) depending on his behavior status. Female (Y0M072) is mildly anemic - possibly a mild advancement of something more subtle going on in earlier blood screenings. It is not clear what might be causing the problem, but another female (XM1048) was treated for a similar problem a few years ago. Female (XM1048) did respond well to an equine iron-vitamin supplement added to her grain daily for ~6 months. Prescribed Supplement (0.1 Asian elephant Y0M072) Ad Lib to a mineral-salt blocks (presentation pending input from former area staff). CLM/TW/RWR
21 Jun 2006	Medical observation	0.1 Asiatic elephant Y0M072 tail bite wound appears swollen and is sensitive to the touch; monitoring status. NOTE: Animal continues to consume 100% of mineral block crushed in grain. TW/RWR
22 Jun 2006	Breeding management	1.1 Asiatic elephant 101, Y0M072 exhibited together from 9:30 AM - 1:30 PM, male observed following female persistently and investigating her tail area. TW/RWR
22 Jun 2006	Adult/adult behavior	1.1 Asiatic elephant 101, Y0M072 exhibited together from 9:30 AM - 1:30 PM, male observed following female persistently and investigating her tail. TW/RWR
27 Jun 2006	Medical treatment	0.1 Asian elephant Y0M072 tail wound has yellow/white pus present, skin is sloughing off and sensitivity has increased. Treatment: Hot compress applied to wound and cleaned with Betadine BID. TW/RWR
30 Jun 2006	Medical procedure	0.1 Asian elephant Y0M072 tail wound treated with Nolvasan scrub and Alu-spray (an aerosol bandage product) BID, pus still present. RT/RWR
1 Jul 2006	Medical procedure	0.1 Asian elephant Y0M072 tail wound treated with Nolvasan scrub, Alu-spray (an aerosol bandage product) BID. RT/RWR
4 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound treated BID and rectal temp taken (96.5 F). Health Status: Wound still has pus and necrotic tissue. Small round (1" diameter) lump (hard to the touch) now present in upper margins of the wound. Very lethargic, very reduced appetite, and very loose stool overnight and today. New wound (2.5"-3") found on rear side of R/ear. Consumed dilute gatorade (1 lb powder/20 gallons water) 100%. Behavior: Animal is very slow to shift into Elephant barn in AM and PM, backed into barn and was slow to shift into ERC for treatment. TW/RWR
7 Jul 2006	Medical diagnosis	Blood Iron Levels (0.1 Asian elephant Y0M072) -> Blood screening results from 5 July show no change in status of anemia. Dietary Change: Discontinue supplement (mineral block) today and start new supplement today. TW/RWR



7 Jul 2006	Medical treatment	Day 1 of UFN Medical/Dietary Supplement (0.1 Asian elephant Y0M072) -> Vitamin-Iron-Mineral Supplement, Red Cell Iron Rich Homogenized, Selenium/Biotin" 4 oz, liquid, SID PerOs in grain. TW/RWR
7 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound treated BID and Vet examined; pus continues to be present, appears to be a normal granular wound at this time. The swelling and sensitivity are unchanged, continue treatment UFN. Defecated 3X overnight and during the day, formed feces passed. TW/RWR
8 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound treated BID with wound appearing shallower, not as swollen around margins and pus continues to be present. TW/RWR
9 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound treated BID with wound showing signs of improvement. Small amount of pus continues to be present. TW/RWR
10 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound treated BID with no significant changes. TW/RWR
15 Jul 2006	Fecal check/worming	Fecal Sample (0.1 Asian elephant Y0M072) submitted sample for culture. TW/RWR
17 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 passed 4 bowel movements overnight, 3 normal and 1 with a soft consistency. TW/RWR
18 Jul 2006	Medical diagnosis	Diagnosis/Fecal Sample (0.1 Asian elephant Y0M072) -> Results = POSITIVE for Campylobacter: treatment to follow. NOTE: A rod- or spiral-shaped bacterium that is a common cause of food poisoning in humans and of spontaneous abortion in farm animals. TW/RWR
18 Jul 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound treated BID, small amount of pus observed, fecal material mostly formed. TW/RWR
19 Jul 2006	Medical treatment	Day 1 of 10 (0.1 Asian elephant Y0M072) -> Prescribed Sulfatrim BID (dosage unknown); Reason: tail injury. Tail wound was cleaned with Nolvasan scrub. DF/RWR
31 Jul 2006	Trained Behavior	Animal: 0.1 Asian Elephant "Nellie" (YOMO72) Trainer: Tarah Bedrossian Staff Required: Two qualified Elephant Keepers Location: Asian elephant barn Time: Shifting times, or whenever possible Date Started: 18 July 2006 Date Completed: 31 July 2006 Materials Required: " Target pole/Target (buoy) " Bite sized treats (chopped produce, grain, cereal, etc) " Whistle " Treat container, belted on waist Behavior to be established, goal (reason) for behavior: Target: The elephant will touch its forehead to a designated target (buoy or fist). The "Target" can be beneficial for shifting, directing the elephant, and body positioning. The present command "steady" will be used if the elephant needs to hold its forehead on the target. Training Plan: 1. The elephant to be trained, must first be conditioned to the bridge (in this case a dog whistle). The beginning process will require several short bridge and reward sessions. The trainer will place the reward into the elephant's trunk, and bridge the instant the elephant places the reward into its mouth. After several bridge and reward sessions the elephant will begin to relate the sound of the whistle, to receiving a food reward. 2. Next, the elephant will need to learn to move toward the target and to become desensitized to touching it's forehead to the target. The trainer will bridge and reward as the animal moves toward the target (buoy). The elephant will be asked to "move up, Target" until the forehead makes contact with the target. The instant the forehead and target touch, the trainer will bridge, jackpot reward, and say "good, Target". Similar sessions should take place until the animal responds to the command "Target" by moving and positioning so that its forehead touches the target. 3. Once the elephant understands the new command "target", other pre-existing behaviors like "foot" can be directed using the target. The trainer will use a command, for instance, "foot" while holding the target in a position that the top of the elephant's foot will touch the target at a desired height. The trainer will bridge and reward each time the foot touches the target. The target can be held by a foot care bar or into a stall, safely, to condition the elephant to move its foot toward the target. 4. The trainer will continue to use the target buoy as a visual cue to position every foot. The target does



not have to touch any particular spot on the foot, but should be positioned so that the animal can move its leg/foot toward the target. In the beginning steps the top of the foot is used since the placement and chances of foot and target contact are most probable. The next step would be to present the target to the side of a foot, say "foot" and the elephant should move its foot toward the target until the foot and target touch. The trainer should be careful to position the target small distances at a time. If the elephant does not attempt to move the foot towards the target, the trainer should return to step 4, until the animal has a good understanding. Keep in mind the elephants are currently trained to move away from a keeper's ankus, and moving toward a target buoy may be challenging. The trainer should be sure the animal is responding consistently to the command being asked before moving to the next step. Sessions should be short, to maintain interest and compliance.

5. Once the elephant responds consistently to the commands, and moves its feet toward the target, the elephant and trainer are ready for the next step. For the behavior "come-in-tight": the elephant will be positioned so that when asked "come-in-tight" the animal's side will come into contact with the target. The trainer will bridge the instant the side touches the target. The trainer will continue to ask "come-in-tight" in different locations. The elephant should not remove its side from the target until told "alright". The trainer should use the command "steady" to keep the elephant from moving its side away from the target. In the beginning the trainer should bridge and reward as the animal holds its position (side touching target). If the animal pulls away the trainer can say "come-in-tight" again, the elephant should reposition so that its side touches the target again. The first sessions should not require the elephant to hold in position too long. The trainer should always aim to have a successful training session.

Once the animal appears to be responding well to the training sessions and is excited to participate, the frequency of rewards can decrease.

Evaluation

Nellie progressed well through the target training process. She has responded very well to the training, and has not shown signs of regression. TW/TB/RWR

7 Aug 2006	Medical observation	0.1 Asian elephant Y0M072 tail wound cleaned with Nolvasan scrub. TW/RWR
26 Aug 2006	Medical diagnosis	Trunk Wash Sample/Annual TB Test Results: Per Metrozoo Vet Dept. = 1.1 Asian elephant 101, Y0M072 -> NEGATIVE for any mycobacterium growth; 1.1 South African bush elephant 928, 269 -> NEGATIVE for any mycobacterium growth; 0.1 South African bush elephant 270 -> Vet is waiting on this result due to lab having problems with contamination with one of the samples. NOTE: Samples undergo a 3 month culture process before they are able to provide the diagnosis. CLM/TW/RWR
2 Oct 2006	Medical observation	0.1 Asian elephant Y0M072 observed dribbling urine in AM/PM, did not observe animal urinate with normal stream all day, behavior and appetite normal. Animal was observed to drink a lot of water from hose in AM/PM. TW/RWR
10 Oct 2006	Research Sample	Blood Draw (1.1 Asiatic elephant 101, Y0M072) -> Blood samples collected for EEHV study (18 ml from each); follow-up blood screening for renal function in male 101 and anemia for female Y0M072. NOTE: Pending further information on lab, primary investigator to study and/or facility requesting samples. TW/RWR
24 Oct 2006	Medical observation	0.1 Asiatic elephant Y0M072 urination appeared to be a full stream with no dribbling and otherwise normal in volume; appeared to be straw colored; reported to be clinically NORMAL upon examination by Vets. TW/CLM/RWR
8 Dec 2006	Medical treatment	Day 1 of UFN Prescribed Treatment Plan (0.1 Asiatic elephant Y0M072) -> Abrasions to be cleaned with water and betadine solution BID by keepers, Rx steroid cream (Animax) to be applied topically to trunk injuries BID and Banamine paste 3000 mg PerOs, BID. TW/RWR
8 Dec 2006	Medical observation	Medical Event (0.1 Asiatic elephant Y0M072) -> Animal fell into the exhibit moat and sustained the injuries to her trunk while attempting to climbing out. She was found this AM with multiple superficial scrapes on forehead, L/rear leg, interior septum and extensive abrasions with minor swelling to the underside of the trunk. Staff Vet evaluation and recommendation was to clean abrasions twice daily with water and betadine scrub. RT/RWR
9 Dec 2006	Medical treatment	0.1 Asiatic elephant Y0M072 trunk wound was cleaned and treated with Animax ointment. RT/RWR
13 Dec 2006	Medical observation	0.1 Asiatic elephant Y0M072 trunk wound observed with a significant amount of yellow-grey pus/necrotic tissue of wound. Vet checked and does not appear to be infected, but normal healing process for elephant skin. TW/RWR
13 Dec 2006	Medical treatment	Prescribed Rx Day 1 of _ (0.1 Asiatic elephant Y0M072) -> Novalsan scrub, dilute Betadine and 1%



Silver Sulfadiazine cream applied topically BID. Health Status: Animal's appetite is normal; continues to be observed rubbing her trunk on objects. TW/RWR

3 Jan 2007 Medical treatment

0.1 Asiatic elephant Y0M072 trunk wound was treated SID, wound is significantly smaller and healing well. Foot Work NOTE: P2 digit on L/fore foot was trimmed and filed; the hole is growing out at bottom of nail. The area was beveled and Koper-tox was applied. TW/RWR

15 Mar 2007 Medical diagnosis

Per an e-mail from the Sr. Veterinarian (C. Miller) this is a paraphrase of her communication -> Anemia/Health Status (0.1 Asiatic elephant Y0M072) -> Veterinary Dept. has been evaluating this animal's anemia at least once monthly; current levels have been holding in the low 30's of hematocrit reading and this seems to be good. Last week's blood work was examined closely when animal began to exhibit lethargy/soft stool. The final results were essentially unremarkable as well; a fecal culture from her & male 101 last week yielded only normal flora - no pathogens found. Last night Eduardo (Elephant Area Lead Keeper) reported to vets that Y0M072 was more-or-less back to normal now. CLM/TW/RWR