

Report Start Date
1/1/1900

Specimen Report for ASHEBORO / 1772

Report End Date
8/21/2008

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

Family: Elephantidae
Order: Proboscidea

Current information

Sex: Female Sire ID: WILLIE at Riddles Elephant Brd.Frm.&Wild
Birth type: Captive born Dam ID: TONGA at Riddles Elephant Brd.Frm.&Wild
Birth Location: Riddles Elephant Brd.Frm.&Wildf.Sanc. Rearing: Parent
Birthdate-Age: 21 Jan 2002 - 6Y,6M,29D Hybrid: Not a hybrid
Time since last Acq: 0Y,9M,24D 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>
28 Oct 2007	Purchase from RIDDLES / BATIR	ASHEBORO / 1772		

<u>Date</u>	<u>Identifier type</u>	<u>Identifier</u>	<u>Location</u>
28 Oct 2007	Regional Studbook #	519	AZA
28 Oct 2007	House Name	BATIR	

<u>Date</u>	<u>Type</u>	<u>Value</u>	<u>Units</u>	
23 Sep 2007	live animal weight	1375	kilogram	weighed at Riddle's Elephant and Wildlife Sanctuary

<u>Date</u>	<u>Note type</u>	
28 Oct 2007	Acquisition note	Purchased from Riddles Elephant Sanctuary, P.O. Box 715, Greenbrier, AR 72058. Picked up from Riddles and driven by truck to zoo by Eddie Novak. Arrived safely. This comment was added to the following specimens: 1771, 1772.
29 Oct 2007	Fecal check/worming	Results of 1st quarantine group fecal sample submitted were negative. This comment was added to the following specimens: 1771, 1772.
29 Oct 2007	Medical note	Began 10-day treatment of SMZ-Trimeth BID for broken left tusk 5-day treatment of Banamine SID. Flushed tusk with nolvasan solution and peroxide.
31 Oct 2007	Medical note	Medical procedure on 1772 due to broken left tusk. Separated from 1771 into EBST1 and 1772 in EBST3. 1772 darted in rt hip and went down in about 15 mins. Dr. Spodnik cleaned tusk pulp and trimmed tusk down. Then filled tusk with calcium chloride. Cleaned up around tusk and then took mold of tusk. Also gave 1772 rabies vaccine and tetanus. Procedure last about 2 1/2 hrs. 1772 got up quickly and was put with 1771 back in EBST1. Both were then put out in EBNPAD1 for remainder of day. Mold of tusk was taken to design.
2 Nov 2007	Fecal check/worming	Results of 2nd quarantine fecal sample submitted were negative.
3 Nov 2007	Medical note	100 % a.m. and p.m. TMPS.
4 Nov 2007	Medical note	Received all meds am/pm, flushed Left sulcus with dilute H2O2 1X.
5 Nov 2007	Medical note	Changed antibiotics to Amoxicillian, 22.4 capsules per 2x daily, sulcus of repaired tusk had purulent material, flushed with water and Nolvasan; Dr. Devoe examined.
7 Nov 2007	Medical note	Flushed sulcus w/ water BID, received 100% of am+pm doses of Ampicilin, and fiber therapy.
8 Nov 2007	Medical note	Received Ampicillian BID per perscription 100%.
8 Nov 2007	Medical note	Blood collection left ear; purple/red top.
10 Nov 2007	Medical note	Given fiber therapy BID per prescription. 100% administered.
13 Nov 2007	Fecal check/worming	Results of 3rd quarantine fecal sample submitted were negative.
16 Nov 2007	Medical note	Flushed sulcus BID with water; did get some pus.
18 Nov 2007	Medical note	Flushed sulcus BID with water and tusk looks good.
19 Nov 2007	Medical note	Meds have ended.
20 Nov 2007	Medical note	No pus from Batir tusk.

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Specimen Report for ASHEBORO / 1772

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29 Nov 2007	Medical note	Had sulcus flushed with water, no pus observed.
1 Dec 2007	INTRODUCTION	<p>Introductions: 1771/1772 locked in north paddock while 1768 brought over and given access from stall beside ERD site up to maternity stall and over into her night stall and paddock; also roll up garage door was opened to allow visual contact; 1768 was calm/relaxed, when first saw 1771 thru garage door she squatted/urinated, 1768 again seemed to want to stay and be where she can see other elephants. A few rumbles out of both 1768 and 1771. 1768 left over in five stalld ~45 min, then brought back to her night stall and paddock and 1771/1772 brought inside.</p> <p>This comment was added to the following specimens: 1768, 1771, 1772.</p>
2 Dec 2007	INTRODUCTION	<p>Moved 1768 over to 1771/1772's stall while they were closed in their paddock for a visual howdy for 1 hr.. Good, calm responses.</p> <p>This comment was added to the following specimens: 1768, 1771, 1772.</p>
6 Dec 2007	INTRODUCTION	<p>Intros: 1768 given visual access with 1771/1772 for a couple hours this morning - 1768 squatted/urinated when she first saw 1771/1772, but all were calm otherwise throughout "howdy".</p>
10 Dec 2007	INTRODUCTION	<p>INTRODUCTION: 1771/1772 locked in paddock EBNPAD1 while 1768 brought over and into EBNPAD2 and given access to EBST3; 1771/1772 given access to EBST1; several interactions at mesh gate A1 also they had visuals in barn left like this for 2 1/2 hours.</p>
13 Dec 2007	INTRODUCTION	<p>Intros: 1771/1772 in EBNPAD1 and 1768 in EBNPAD2. Both had access into barn. Went well, did see trunk touches through mesh.</p>
17 Dec 2007	INTRODUCTION	<p>INTRODUCTION: as temperatures were low, 1771/1772 were brought to EBST3 and 1768 brought over to EBST1 for more visual and allow cleaning of EBST7; no noteworthy behaviors observed.</p> <p>This comment was added to the following specimens: 1768, 1771, 1772.</p>
16 Jan 2008	Medical note	Left sulcus flushed with hose, sprayed with dilute betadine. Started on ampicillan.
26 Jan 2008	Medical note	Received meds 100% BID - final day.
28 Jan 2008	Medical note	Vets looked at 1772's tusk.
28 Feb 2008	INTRODUCTION	<p>INTROS - 1771/1772 shifted to EBST3 before bringing 1771 back to EBST2 for howdy w/ 1768 in EBST1. No immediate response from either cow until they spotted each other. At that time 1768 turned, screamed and retreated back to EBST7. 1768 was reluctant to approach again but did not show any signs of distress like contortions or displacement towards keepers. 1771 remained calm for the most part and 1768 remained at a distance even after 1772 was added to the equation. 1771/1772 shifted back about 15min later to EBST3 w/ out incident while 1768 remained in EBST1 for remainder of day and continued to display calm demeanor.</p>
29 Feb 2008	INTRODUCTION	<p>Intros: 1768 given stall (EBST1) adjacent to 1771 (in EBST2). (1772 in EBST3). 1768 did better today, spent a little more time in stall before going back to EBST7. Backed up a few times, urinated and defecated, was very submissive. Still did not get close enough to touch/be touched by 1771.</p>
3 Apr 2008	INTRODUCTION	<p>INTROS: 1771/1772 put on exhibit in South before all others. 1611 and 1367 came out shortly after. 1611 was running and trumpeting along the the south exhibit side with 1367 following her. 1771 ran over with ears flared and also trumpeted. 1367 turned her back right away but 1611 stood tall with ears flared. Both stood with ears flared looking at each other. 1771 did turn and run back towards gate. 1611 and 1367 just stood with ears flared and then started to run back and forth again trumpeting. 1771 then came back over with ears flared and started grazing near North exhibit. 1771 went back to look for 1772 which was up by the gate. She then ran back over towards 1611 and 1367 they both turned backs to 1771. 1367 also did a head stand at one point and 1771 did a head stand and tusked the ground once. When 27 came out everything calmed down and 1771 did eat along the North exhibit. Overall good interactions observed.</p> <p>This comment was added to the following specimens: 1367, 1611, 1771, 1772.</p>

24 Apr 2008	INTRODUCTION	INTRODUCTIONS: 1771/1772 held in ENBPAD1 while 1768 held in EBNPAD2 and doors A4, B4, B3, B2, A2 were opened; 1771/1772 allowed to go over into EBNPAD2, 1768 screamed and ran into barn; for ~30 min all elephants just kept circling in the run around. 1768 VERY subordinate to both 1771/1772, a couple times 1771/1772 got seperated and 1768 and 1772 found each other in stall inside the barn but 1768 very deferential to 1772. 1771 took a couple of jabs at 1768 once in the buttocks and once in the side as she caught 1768 against paddock bars but after about 45 minute mark all started calming down. 1772 was very interested in 1768, following her constantly; eventually 1768 allowed 1772 to approach and then 1771 approach and some very good interactions were noted at about the 1 hour mark. It was determined to close both doors from paddocks to stalls and some small browse was given. After browse was eaten by 1771/1772, 1771 really picked up aggression toward 1768, deliberately working 1768 into a corner then jabbing w/tusks in buttock in EBNPAD2, pinning 1768 against log in corner of EBNPAD2, getting 1768 cornered in EBNPAD1 and jabbing several times with tusks. (Fortunately, 1771's tusks were recently filed blunt and evened out.) After elephants were broken up they were seperated and session called off. 1768 retained some superficial scrapes but no other injury noted, elephants were seperated but all allowed access to the barn (until after lunch - 1771/1772 locked out to clean/setup) 1768 would come into barn as long as 1771 was not in barn, 1768 would exit barn when 1771 came into barn. 1768 given access to EBST2/3 plus EBNPAD2 for the night, 1771/1772 given access to EBST1 and EBNPAD1 for the night.
25 Apr 2008	INTRODUCTION	Introductions - Continued from 4/24 - 1768 with 1771/1772 Initiated intro same as 4/24 Did not introduce food or close off any area of "roundabout" 1772 again walked right up to 1768 and followed during most of intro period. 1768 had 3 - 4 interactions with 1771, all with good responses and no aggression observed. 1771 observed placing her trunk on 1768 rump at one point without any attached aggressive movements. Overall a much calmer intro, with no problems encountered. Intro was called after ~ 35 min. to end on a positive note - All returned to respective stalls/paddocks..
28 Apr 2008	INTRODUCTION	Introduction: 1771/1772 were introduced to 1768 today. They were together for 35 minutes. They were very excited to begin with lots of running and vocalizing. They quickly settled down. They spent some time near each other in the barn. 1768 showed submissive behavior. 1772 showed lots of interest in 1768. 1771 put her trunk and tusk on 1768, but did not hit hard or push much.
30 Apr 2008	INTRODUCTION	INTRODUCTIONS: 10:40-11:50 did same as yesterday for set up. Very little interaction between 1768 and 1771. 1768 and 1772 did spend time together in stall. 1771 was seen displacing aggression on pipeline ball and neither 1768 or 1772 were in sight. Very calm throughout entire intro. This comment was added to the following specimens: 1772, 1768, 1771.
20 Jun 2008	Medical note	Rec'd 6 bananas and three potatoes for K+. This comment was added to the following specimens: 1367, 1611, 1768, 1771, 1772.
8 Aug 2008	Fecal check/worming	Results of routine group fecal sample submitted were negative. This comment was added to the following specimens: 1771, 1772.

<u>Date</u>	<u>Enclosure</u>	
28 Oct 2007	EBST1	Into quarantine in new elephant barn.

<u>Date</u>	<u>Sex</u>
28 Oct 2007	Female

<u>Date</u>	<u>Rearing</u>
28 Oct 2007	Parent

<u>Date</u>	<u>Parent(s)</u>	<u>local Id</u>	<u>Location</u>
28 Oct 2007	Sire	WILLIE	RIDDLES
28 Oct 2007	Dam	TONGA	RIDDLES

Medical History Report - Summary for Individual Specimen
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1772
Common Name: African elephant	Female
Name: BATIR	Birth: 21.Jan.2002

.....2007....

- 23.Aug Blood sample: (EDTA) Hematology/Chemistry/Serology results.
WBC:9.52 *10³/UL; HCT: 40.0%; BUN:10 MG/DL;
Clinical note recorded. (U/A)
- 28.Oct Obtained from another institution.
- 29.Oct Parasitology examination: (QUARANTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
Clinical note recorded. (RSD)
- 31.Oct Immobilized: ETORPHINE/RINGER'S/TETANUS/RABIES/NALTREXONE
Animal was rolled over dorsally at 12:32 from right lateral
Blood sample: (EDTA) (12:38.0) Hematology/Chemistry/Serology results.
WBC:13.00 *10³/UL; HCT: 50.0%; BUN:4 MG/DL;
Rx: RINGER'S SOLUTION, LACTATED USP 11.5lit IV
Vaccination: TETANUS TOXOID 1ml IM
RABIES VACCINE (KILLED - 3 YEAR) 1ml SQ
Clinical note recorded. (SKC)
- 2.Nov Parasitology examination: (QUARANTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 4.Nov Clinical note recorded. (CUL)
- 5.Nov Purpose/Problem: Sulcus infection
Rx: AMPICILLIN TRIHYDRATE 11200mg PO BID for 10 days.
Clinical note recorded. (RX)
- 8.Nov Blood sample: (EDTA) (8:45.0) Hematology/Chemistry/Serology results.
WBC:18.12 *10³/UL; HCT: 32.6%; BUN:6 MG/DL;
Clinical note recorded. (RSD)
- 9.Nov Clinical note recorded. (RSD)
- 13.Nov Parasitology examination: (QUARANTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 17.Nov Clinical note recorded. (CUL)

.....2008....

- 15.Jan Clinical note recorded. (SKC)
- 16.Jan Purpose/Problem: infected tusk sulcus
Rx: AMPICILLIN TRIHYDRATE 11200mg PO BID for 10 days.
Clinical note recorded. (SKC)
- 22.Jan Clinical note recorded. (CUL)
- 28.Jan Clinical note recorded. (ML)
- 15.May Clinical note recorded. (MRL)
- 13.Aug Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002

Clinical Note:

23.Aug.2007

<<< Urinalysis Report >>>

Laboratory:

Hanes Hospital
 NCSU-CVM
 Other

Collection Date: 8/23/07
Collection Time:
Submission Date:

Sample collection:

Sample Storage: REFRIGERATOR

Specific Gravity (Refractometer): 1.026

Urinalysis:

Multistix

Color: YELLOW
Turbidity: CLOUDY
Glucose (mg/dl): NEG
Bilirubin: NEG
Ketone (mg/dl): NEG
Sp. Grav.: 1.025

Blood: NEG
pH: 8,5
Protein (mg/dl): NEG
Urobilinogen: 0.2
Nitrite: NEG
Leukocytes: NEG

Microscopic

Casts (10x): NONE
WBC (40x): NONE
RBC (40x): NONE
Epith. Cells (40x): 0-1
Bacteria (40x): 5-25
Crystals (40x): NONE
Other: LIPID MOLECULES

(U/A)

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1772
Common Name: African elephant	Female
Name: BATIR	Birth: 21.Jan.2002
	Age: 5Y 7M 1D

Collection Information >>
 Health Status: Normal
 Fasting Time: < 8 hours
 Activity: Calm
 Manual restraint used.

Date of Collection: 23.Aug.2007
 Time of Collection:
 Collected by:

Hematology >>
 Analysis Information >>
 Anticoagulant: EDTA
 Storage: Refrigerated (<48 hours)
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 24.Aug.2007
 Time of Analysis: 14:00
 Analysis by: HSS
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	9.52		*10 ³ /UL
HEMATOCRIT	40		%
SEGMENTED NEUTROPHILS	24	(2.285)	% (*10 ³ /UL)
LYMPHOCYTES	44	(4.189)	% (*10 ³ /UL)
MONOCYTES >	32	(3.046)	% (*10 ³ /UL)

Morphology Results >>
 ANISOCYTOSIS +

Comments >>
 anisocytosis +
 thrombocytes +++

Hemavet:
 WBC 10.92, Ne 0.85, Ly 67.59, Mo 26.52, Eo 4.97, Ba 0.08.
 RBC 3.53, HB 12.2, HCT 40.3, PLT 187, MCV 114.2, MCH 34.6, MCHC 30.3,
 RDW 18.8, MPV 4.2, PDW 19.2.

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ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1772
Common Name: African elephant	Female
Name: BATIR	Birth: 21.Jan.2002
	Age: 5Y 7M 1D

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Manual restraint used.

Date of Collection: 23.Aug.2007
Time of Collection:
Collected by:

Chemistry >>

Analysis Information >>
Chemistry Sample: Serum
Storage: Refrigerated (<48 hours)
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 24.Aug.2007
Time of Analysis: 13:44
Analysis by: DGH
Automated analysis.

Tests and Results >>

GLUCOSE	>	97	MG/DL
BLOOD UREA NITROGEN		10	MG/DL
CREATININE		1.2	MG/DL
BUN/creatinine ratio		8.33	
CALCIUM		11.5	MG/DL
SODIUM		131	MEQ/L
POTASSIUM	>	5.3	MEQ/L
sodium/potassium ratio		24.7	
CHLORIDE	>>	100	MEQ/L
TOTAL PROTEIN (COLORIMETRY)	<	7.1	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	<	7.2	GM/DL
ALBUMIN (COLORIMETRY)		3.5	GM/DL
GLOBULIN (COLORIMETRY)		3.6	GM/DL
albumin/globulin ratio		0.972	
ASPARTATE AMINOTRANSFERASE	<	7	IU/L
TOTAL BILIRUBIN		0.1	MG/DL
ALKALINE PHOSPHATASE		164	IU/L
LACTATE DEHYDROGENASE		1133	IU/L
CREATINE PHOSPHOKINASE		165	IU/L
GAMMA GLUTAMYLTRANSFERASE	<	5	IU/L

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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 7M 1D
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Clinical Note:

29.Oct.2007

Observation:

This elephant fracture her left tusk at the level of the sulcus sometime during transport. The pulp canal is open. The elephant is acting normally otherwise and appears to be in good condition. She is eating, drinking, defecating and urinating normally and appears to be behaviorally unremarkable.

We will schedule an immobilization procedure ASAP for endodontic treatment of her fractured tusk. (RSD)

Submission Data >>

Type: Fecal sample
Purpose: QUARANTINE EXAMINATION

Sample id.: 2007-0565
Date collected: 29.Oct.2007
Time collected: 9:00
Collected by: JWS

Collected from:

Group of specimens housed together.

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 29.Oct.2007
at: 14:45
by: JFC

Tests & Results >>

DIRECT MICROSCOPIC EXAMINATION NO PARASITES SEEN
FLOATATION - NA NITRATE NO PARASITES SEEN

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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 7M 1D

Clinical Note:
Quarantine Exam and Tusk Fracture Repair.

31.Oct.2007

Proc:

- 1) anesthesia with Etorphine and supplemental ventilation and oxygen
- 2) Quarantine Examination with phlebotomy and vaccinations
- 3) Surgical debridement of tusk fracture and vital pulpotomy

SO: Animal was darted with 4mg etorphine in the left hind limb using a 6cm collared needle on a 1 cc dart. The animal showed initial signs in 5 mins and was recumbent in 15 mins. She was rigid when recumbent and fell onto her left side. She was rolled onto her right side and intubated with a 35 mm ET and the cuff was not inflated. Venous and arterial catheters were placed in the auricular vessels. BP was moderately elevated with means above 150. ECG was normal throughout. Animal was ventilated by a modified y-piece/leaf blower apparatus. Sigh breaths were administered 1-2 breaths per minute and O2 was administered into the y-piece. PaCO2 ranged between 50-55mmHg and PaO2 ranged between 89-97%. Animal received 2.5 mg of etorphine as 0.5mg boluses IV throughout procedure (approx every 10mins) for a total of 6.5 mg etorphine. Animal was reversed with 200mg naltrexone IV and 450mg IM. Recovery was rapid and complete and animal was returned to mother within 10 mins.

2) No abnormalities were noted on physical exam aside from fractured left tusk. All foot pads are healthy and swelling over the calvarium has disappeared. CBC showed elevation in total WBC (13,000) with left shift. Diff shows 33% segs and 9% bands with 24% lymphs and 33% monos. Fibrinogen is 800mg/dL.

3) The fractured tusk extended about 10 inches past the sulcus. Dr. Gary Spodnick (VSH) and Dr. Krug (NCSU) cut off the distal 2 inches of the tooth and then resected 2 inches of damaged pulp. Vital pulp was exposed and the cavity was flushed and dried and the cavity was packed with calcium hydroxide and filled with ca hydroxide paste and amalgam. At the point where the fracture meets the sulcus there is a small 1-2 inch round abscess in the sulcus. It was partially cleaned out during the end of the procedure but will be allowed to drain.

A: The left shift in this animal is concerning that infection may be systemic. We will need to recheck this after 1 week of antibiotic and

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antiinflammatory therapy.

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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 7M 1D

Clinical Note:

31.Oct.2007

P: Attempt rebleed under manual restraint, continue antibiotic and antiinflammatory therapy.

Rx: RINGER'S SOLUTION, LACTATED USP 11.5 ml IV

Rx: TETANUS TOXOID 1 ml IM (174B)

Rx: RABIES VACCINE (KILLED - 3 YEAR) 1 ml SQ (12509B) y (SKC)

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Anesthesia Records Report - Individual Specimen
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1772
Common Name: African elephant	Female
Name: BATIR	Birth: 21.Jan.2002
	Age: 5Y 9M 9D

Baseline Data >> Date of anesthesia: 31.Oct.2007
 Health: Normal - class I
 Preanesthetic Fasting: 8-24 hours
 Activity: calm and alert
 Immobilized in small enclosure (as an isolated animal).
 Body weight: 1361 kg (3000 Lb) Est. Veterinarian: SKC
 Body condition: good / normal Recorded by: CAP

Immobilization Data >>
 Initial dose given at 12:11
 Showed initial drug effects at 7 min (12:18)
 Recumbent at 14 min (12:25)
 No anesthetic complications.
 Anesthetic induction was excellent
 Muscle relaxation was good
 Overall rating for anesthesia: excellent

Recovery Data >>
 Recovery was normal
 Recovered to normal by 14:06

Drugs given dosage	Amount	Time	Effect produced	Bottle #
ETORPHINE	4 mg	12:11	mild sedation @7 min	1
2.939mcg/kg	Non-metal	Dart - i.m.		
ETORPHINE	.5 mg	52 min	surgical anesthesia @2 min	1
0.367mcg/kg	handsyringe	- i.v.		
ETORPHINE	.5 mg	62 min	surgical anesthesia @2 min	1
0.367mcg/kg	handsyringe	- i.v.		
ETORPHINE	.5 mg	74 min	surgical anesthesia @2 min	1
0.367mcg/kg	handsyringe	- i.v.		
ETORPHINE	.5 mg	80 min	surgical anesthesia @1 min	1
0.367mcg/kg	handsyringe	- i.v.		
ETORPHINE	.5 mg	92 min	surgical anesthesia @2 min	1
0.367mcg/kg	handsyringe	- i.v.		
RINGER'S SOLUTI	11.5 lit	26 min		

E 1772.TXT

TETANUS TOXOID	intravenous catheter		
	1 ml 73 min		174B
RABIES VACCINE	handsyringe - i.m.		
	1 ml 73 min		12509B
NALTREXONE	handsyringe - s.c.		
	450 mg 113 min	fully recovered @2 min	
0.331 mg/kg	handsyringe - i.m.		

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Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1772
Common Name: African elephant	Female
Name: BATIR	Birth: 21.Jan.2002

Drugs given dosage	Amount Route	Time	Effect produced	Bottle #
NALTREXONE 0.147 mg/kg	200 mg	113 min	fully recovered @2 min	
	handsyringe - i.v.			

Physiological Data >>						Blood Sample Data >>	
Time	Body Temperature	Heart rate	Resp. rate	O2 Sat.	Blood Pressure	Time	Sample type(s)
12:31			12			12:38	EDTA, Serum
12:40		32					
12:44		39		94			
12:46				97	232/157/185		
12:56		56			235/159/190		
13:00		42	12	91	237/161/192		
13:07		38	12	96	237/161/192		
13:17		40	12	98	231/157/193		EDTA, whole blood
13:30		41	10	94	216/160/178		
13:39		48	9	98	225/172/182		
13:49		48	9	94	232/159/187		
13:53				97			

Comments >>

Animal was rolled over dorsally at 12:32 from right lateral recumbancy to left lateral to expose the left tusk requiring the root canal.

Printed on: 19.Aug.2008

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

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Scientific Name: LOXODONTA AFRICANA (no subsp)           Accession #: 1772
Common Name: African elephant                           Female
Name: BATIR                                             Birth: 21.Jan.2002
                                                         Age: 5Y 9M 9D
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Collection Information >>
Health Status: Normal
Fasting Time: 8-24 hours
Activity: Calm
Weight: 1375 Kg on 23.Sep.2007
Restraint was with the following drugs:
  ETORPHINE, NALTREXONE

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Date of Collection: 31.Oct.2007
Time of Collection: 12:38.0
Collected by: SKC
Sample Collection Site: EAR VEIN

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Hematology >>
Analysis Information >>
Anticoagulant: EDTA
Storage: Fresh
Sample Quality: No quality problems.

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Laboratory: NC ZOO
Date of Analysis: 31.Oct.2007
Time of Analysis: 14:55
Analysis by: CAP
Manual analysis.

```

Tests and Results >>

WHITE BLOOD CELL COUNT	13.0		*10 ³ /UL
RED BLOOD CELL COUNT >>	4.56		*10 ⁶ /UL
HEMOGLOBIN >>	17.9		GM/DL
HEMATOCRIT >>	50		%
MCV <	110		fL
MCH <	39.3		ug
MCHC	35.8		gm/dL
SEGMENTED NEUTROPHILS	33	(4.290)	% (*10 ³ /UL)
NEUTROPHILIC BANDS	9	(1.170)	% (*10 ³ /UL)
LYMPHOCYTES	24	(3.120)	% (*10 ³ /UL)
MONOCYTES >>	33	(4.290)	% (*10 ³ /UL)
EOSINOPHILS	1	(0.130)	% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)
PLATELET COUNT <	156		*10 ³ /UL
FIBRINOGEN >>	800		MG/DL

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Comments >>
RBC's okay

```

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Hemavet:
WBC 13.00, Ne 4.57, Ly 50.71, Mo 20.42, Eo 24.09, Ba 0.20.

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E 1772.TXT
RBC 4.56, HB 17.9, HCT 30.6, PLT 156, MCV 110.9, MCH 39.3, MCHC 35.4,
RDW 18.6, MPV 4.6, PDW 17.8.

ISIS reference values are for LOXODONTA AFRICANA
Printed on: 19.Aug.2008

/ISIS/MedARKS/5.32a

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 9M 9D

Collection Information >>
Health Status: Normal
Fasting Time: 8-24 hours
Activity: Calm
Weight: 1375 Kg on 23.Sep.2007
Restraint was with the following drugs:
ETORPHINE, NALTREXONE

Date of Collection: 31.Oct.2007
Time of Collection: 12:38.0
Collected by: SKC
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 31.Oct.2007
Time of Analysis: 15:04
Analysis by: CAP
Automated analysis.

Tests and Results >>

GLUCOSE >>	128	MG/DL
BLOOD UREA NITROGEN <<	4	MG/DL
CREATININE	1.2	MG/DL
BUN/creatinine ratio	3.33	
CALCIUM	11.3	MG/DL
SODIUM >>	138	MEQ/L
POTASSIUM >>	5.7	MEQ/L
sodium/potassium ratio	24.2	
CHLORIDE >>	95	MEQ/L
TOTAL PROTEIN (COLORIMETRY)	7.8	GM/DL
TOTAL PROTEIN (REFRACTOMETER)	8.2	GM/DL
ALBUMIN (COLORIMETRY)	3.6	GM/DL
GLOBULIN (COLORIMETRY)	4.2	GM/DL
albumin/globulin ratio	0.857	
ASPARTATE AMINOTRANSFERASE <	12	IU/L
TOTAL BILIRUBIN >>	0.5	MG/DL
ALKALINE PHOSPHATASE >>	294	IU/L
LACTATE DEHYDROGENASE	1564	IU/L
CREATINE PHOSPHOKINASE	350	IU/L
GAMMA GLUTAMYLTRANSFERASE <	4	IU/L

ISIS reference values are for LOXODONTA AFRICANA
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Medical History Report - Individual Specimen
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)	Accession #: 1772
Common Name: African elephant	Female
Name: BATIR	Birth: 21.Jan.2002

Prescription Data >>	Starting date: 31.Oct.2007
Drug: RINGER'S SOLUTION, LACTATED USP 11.5 ml IV	
Prescribed by: SKC (31.Oct.2007)	Filled by: (31.Oct.2007)

Prescription Data >>	Starting date: 31.Oct.2007
Drug: TETANUS TOXOID 1 ml IM	
Prescribed by: SKC (31.Oct.2007)	Bottle/Lot #: 174B Filled by: (31.Oct.2007)

Prescription Data >>	Starting date: 31.Oct.2007
Drug: RABIES VACCINE (KILLED - 3 YEAR) 1 ml SQ	
Prescribed by: SKC (31.Oct.2007)	Bottle/Lot #: 12509B Filled by: (31.Oct.2007)

Submission Data >>	Sample id.: 2007-0572
Type: Fecal sample	Date collected: 2.Nov.2007
Purpose: QUARANTINE EXAMINATION	Time collected: 12:00
	Collected by: DC

Collected from:
From an individual specimen.

Examination Data >>	Date examined: 2.Nov.2007
Storage: refrigerated	at: 14:35
Consistency: formed	by: CAP
Gross appearance: Typical	

Tests & Results >>
FLOATATION - NA NITRATE

E 1772.TXT
NO PARASITES SEEN

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
=====

Clinical Note: 4.Nov.2007
Pulp Cavity Tusk culture, received 11/1, reported 11/4/07 (Antech):
Organism #1: Scant growth E. coli.
Organism #2: Scant growth Enterococcus species.
Organism #3: Strep Group B
Organism #4: Bacillus Sp. (non-pathogenic) (CUL)

Clinical Note: 5.Nov.2007
Rx: AMPICILLIN TRIHYDRATE 11200 mg PO BID for 10 days. (RX)

Purpose: sulcus infection

Prescription Data >> Starting date: 5.Nov.2007
Drug: AMPICILLIN TRIHYDRATE 11200 mg PO BID for 10 days
Formulation: 500 mg tablet
Prescribed by: RX (5.Nov.2007) Filled by: RX (5.Nov.2007)
Treatment weight: 1400 kg

Comments >>

Dispensing Note: Dispense 20 doses. Each dose: 22.40 tablets?!?.
Total to dispense: 448 tablets. Use 500 mg tablets.

Clinical Note: 8.Nov.2007
Comment: The calf is doing very well post-procedure. She is still
accumulating purulent material in her left sulcus, but the
inflammation that was previously observed seems to be subsiding. She
is taking her antibiotics well without side-effects. A CBC and
chemistry panel performed today is normal. She was previously noted
to have 9% bands. No bands were observed today. (RSD)

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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)      Accession #: 1772
Common Name: African elephant                      Female
Name: BATIR                                         Birth: 21.Jan.2002
                                                    Age: 5Y 9M 17D
=====

```

Collection Information >>
 Health Status: Abnormal
 Fasting Time: < 8 hours
 Activity: Calm
 Weight: 1375 Kg on 23.sep.2007
 Manual restraint used.

Date of Collection: 8.Nov.2007
 Time of Collection: 8:45.0
 Collected by: D L
 Sample Collection Site: EAR VEIN

Hematology >>
 Analysis Information >>
 Anticoagulant: EDTA
 Storage: Fresh
 Sample Quality: No quality problems.

Laboratory: NC ZOO
 Date of Analysis: 8.Nov.2007
 Time of Analysis: 13:45
 Analysis by: GAW
 Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT >>	18.12		*10 ³ /UL
RED BLOOD CELL COUNT	3.0		*10 ⁶ /UL
HEMOGLOBIN <<	10.9		GM/DL
HEMATOCRIT <	32.6		%
MCV <<	109		fL
MCH <<	36.3		uug
MCHC	33.4		gm/dL
SEGMENTED NEUTROPHILS >>	40	(7.248)	% (*10 ³ /UL)
NEUTROPHILIC BANDS <	0		% (*10 ³ /UL)
LYMPHOCYTES	15	(2.718)	% (*10 ³ /UL)
MONOCYTES >>	45	(8.154)	% (*10 ³ /UL)
EOSINOPHILS	0		% (*10 ³ /UL)
BASOPHILS	0		% (*10 ³ /UL)
PLATELET COUNT	228		*10 ³ /UL
FIBRINOGEN >>	1100		MG/DL

Comments >>
 neutrophils have a few basophilic/azurophilic (?) granules

E 1772.TXT

monocyte - some cytoplasm is vacuolated (almost foamy)
anisocytosis

Hemavet:

WBC 18.12, Ne 2.57, Ly 45.62, Mo 49.75, Eo 1.98, Ba 0.08.
RBC 3.00, HB 10.9, HCT 32.6, PLT 228, MCV 108.6, MCH 36.3, MCHC 33.4,
RDW 18.1, MPV 4.7, PDW 15.9.

ISIS reference values are for LOXODONTA AFRICANA
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Clinical Pathology Records - Specimen Report
NORTH CAROLINA ZOOLOGICAL PARK

Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 9M 17D

Collection Information >>
Health Status: Abnormal
Fasting Time: < 8 hours
Activity: Calm
Weight: 1375 Kg on 23.Sep.2007
Manual restraint used.

Date of Collection: 8.Nov.2007
Time of Collection: 8:45.0
Collected by: D L
Sample Collection Site: EAR VEIN

Chemistry >>
Analysis Information >>
Chemistry Sample: Serum
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: NC ZOO
Date of Analysis: 8.Nov.2007
Time of Analysis: 13:11
Analysis by: GAW
Automated analysis.

Tests and Results >>

	GLUCOSE	83	MG/DL
	BLOOD UREA NITROGEN <	6	MG/DL
	CREATININE	1.2	MG/DL
	BUN/creatinine ratio	5.00	
	CALCIUM >	11.6	MG/DL
	SODIUM >>	139	MEQ/L
	POTASSIUM >	5.3	MEQ/L
	sodium/potassium ratio	26.2	
	CHLORIDE >>	99	MEQ/L
	TOTAL PROTEIN (COLORIMETRY)	7.3	GM/DL
	TOTAL PROTEIN (REFRACTOMETER)	8.1	GM/DL
	ALBUMIN (COLORIMETRY)	3.3	GM/DL
	GLOBULIN (COLORIMETRY)	4.0	GM/DL
	albumin/globulin ratio	0.825	
	ASPARTATE AMINOTRANSFERASE <	11	IU/L
	TOTAL BILIRUBIN >>	0.6	MG/DL
	ALKALINE PHOSPHATASE >>	246	IU/L

E 1772.TXT
LACTATE DEHYDROGENASE 1227 IU/L
CREATINE PHOSPHOKINASE 230 IU/L
GAMMA GLUTAMYLTRANSFERASE < 5 IU/L

ISIS reference values are for LOXODONTA AFRICANA
Printed on: 19.Aug.2008

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 9M 17D
=====

Clinical Note:

9.Nov.2007

Comment: Batir reportedly passed a large amount of sand in her feces today. She is acting fine otherwise. We have ordered a equine psillium product for use, in the meantime we will use metamucil 1-2 cups twice daily for the next 2-3 days. (RSD)

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

Sample id.: 2007-0603
Date collected: 13.Nov.2007
Collected by: DC

Collected from:
From an individual specimen.

Examination Data >>
Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 13.Nov.2007
at: 15:15
by: GAW

Tests & Results >>
FLOATATION - NA NITRATE NO PARASITES SEEN

Clinical Note:

17.Nov.2007

Fecal culture, received 11/14, reported 11/17/07 (Antech):
No Campylobacter species isolated.
No Yersinia species isolated.
Coliforms isolated (normal enteric flora), heavy growth.

No Salmonella or Shigella isolated. (CUL) E 1772.TXT

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Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
Age: 5Y 9M 17D

Clinical Note: 15.Jan.2008
Observation: Batir's left sulcus around her previously fractured tusk is inflamed, sensitive to touch and is again accumulating purulent debris. She reacted aggressively when an attempt was made to touch it. The endodontic repair is still intact. The keepers have been instructed to attempt to collect a swab for culture and to hose the area out as well as possible. We will begin antibiotics and monitor this problem closely. (SKC)

Clinical Note: 16.Jan.2008
RX: AMPICILLIN TRIHYDRATE 11200 mg PO BID for 10 days. (SKC)

Purpose: infected tusk sulcus

Prescription Data >> Starting date: 16.Jan.2008
Drug: AMPICILLIN TRIHYDRATE 11200 mg PO BID for 10 days
Formulation: mg tablet
Prescribed by: SKC (15.Jan.2008) Filled by: SKC (15.Jan.2008)
Treatment weight: 1375 kg

Comments >>

Dispensing Note: Dispense 20 doses.

Daily Treatment Notes >>

Date	Time	Success	By	Comments
16.Jan.2008	:	%		through below:
26.Jan.2008	:	%		last dose - all taken 100%

Clinical Note:
Tusk (sulcus) culture (rec 1/17, reported 1/22, Antech):
Staphylococcus simulans, scant growth
Diphtheroids (non-path), scant growth (CUL)

22.Jan.2008

Printed on: 19.Aug.2008

/ISIS/MedARKS/5.32a

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: BATIR

Accession #: 1772
Female
Birth: 21.Jan.2002
=====

Clinical Note:
Batir is now off medications. His left tusk and surrounding area look good (much improved as far as pus, drainage, pain/sensitivity than before he was put on meds). (ML)

28.Jan.2008

Clinical Note:
Obs: Tusk is growing normally. There is a small hairline crack extending proximally from composite material. there also appears to be a small amount of shrinkage of the composite.
Plan: apply epoxy to dorsal surface of tusk to protect composite. (MRL)

15.May.2008

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

Sample id.: 2008-0432
Date collected: 13.Aug.2008
Time collected: 7:30

Collected from:
Group of specimens housed together.

Enclosure: EBST1

Examination Data >>
Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 13.Aug.2008
at: 13:30
by: DGH

Tests & Results >>
FLOATATION - NA NITRATE NO PARASITES SEEN

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Clinical Pathology Records Report - ISIS/In-House Reference Values
NORTH CAROLINA ZOOLOGICAL PARK

Scientific name: LOXODONTA AFRICANA
Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	10.62 +	2.491	5.000	21.00	(1081)
RBC	*10 ⁶ /UL	3.21 +	0.37	2.10	4.80	(1047)
HGB	GM/DL	13.8 +	1.3	9.0	18.6	(1071)
HCT	%	40.0 +	3.8	29.5	54.0	(1107)
MCH	MG/DL	43.2 +	2.7	36.4	65.6	(1031)
MCHC	uug	34.5 +	1.8	28.3	46.4	(1057)
MCV	fL	125.4 +	7.8	91.1	190.0	(1029)
SEGS	*10 ³ /UL	2.897 +	1.690	0.000	11.40	(778)
BANDS	*10 ³ /UL	0.908 +	0.748	0.000	3.960	(520)
LYMPHOCYTES	*10 ³ /UL	5.326 +	3.263	0.022	64.40	(787)
MONOCYTES	*10 ³ /UL	1.164 +	1.536	0.000	8.639	(742)
EOSINOPHILS	*10 ³ /UL	0.240 +	0.301	0.000	2.898	(631)
BASOPHILS	*10 ³ /UL	0.041 +	0.077	0.000	0.525	(424)
NRBC	/100 WBC	1 +	1	0	3	(25)
PLATE. CNT.	*10 ³ /UL	498 +	278	177	1380	(124)
RETICS	%	0.0 +	0.0	0.0	0.0	(6)
GLUCOSE	MG/DL	83 +	13	47	141	(1001)
BUN	MG/DL	11 +	3	0	21	(1024)
CREAT.	MG/DL	1.5 +	0.3	0.5	4.4	(962)
URIC ACID	MG/DL	0.3 +	0.4	0.0	5.1	(356)
CA	MG/DL	11.0 +	0.5	8.7	13.9	(1010)
PHOS	MG/DL	4.9 +	0.8	3.0	8.2	(981)
NA	MEQ/L	129 +	3	111	146	(995)
K	MEQ/L	4.7 +	0.4	3.9	6.9	(1005)
CL	MEQ/L	88 +	3	71	108	(984)

		E 1772.TXT			
IRON	MCG/DL	79 +	24	24	130 (29)
MG	MG/DL	2.33 +	0.54	1.40	4.20 (44)
CHOL	MG/DL	67 +	19	0	302 (947)
TRIG	MG/DL	68 +	31	14	179 (876)
T.PROT. (C)	GM/DL	7.7 +	0.5	5.8	9.6 (906)
T.PROT. (R)	GM/DL	8.0 +	0.4	7.4	8.6 (8)
ALBUMIN (C)	GM/DL	3.6 +	0.3	2.2	4.5 (841)
GLOBULIN (C)	GM/DL	4.1 +	0.5	2.4	5.8 (832)
AST (SGOT)	IU/L	25 +	9	7	80 (982)
ALT (SGPT)	IU/L	6 +	6	0	30 (278)
T. BILI.	MG/DL	0.2 +	0.1	0.0	1.0 (829)
D. BILI	MG/DL	0.0 +	0.0	0.0	0.2 (90)
I. BILI.	MG/DL	0.1 +	0.1	0.0	0.5 (89)
AMYLASE	U/L	3389 +	1520	0	7918 (130)
ALK.PHOS.	IU/L	123 +	55	47	364 (978)
LDH	IU/L	1043 +	575	157	4306 (949)
CPK	IU/L	256 +	198	44	1263 (105)

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Clinical Pathology Records Report - ISIS/In-House Reference Values
NORTH CAROLINA ZOOLOGICAL PARK

Scientific name: LOXODONTA AFRICANA
Common Name: African elephant

		ISIS Values			
		Mean	S.D.	Min.	Max. (N)
OSMOLARITY	MOSMOL/L	258 +	4	245	272 (652)
HCO3	MEQ/L	177.7 +	398.3	23.0	1081 (7)
Body Temperature:		39.0 +	0.0	39.0	39.0 (1)
CO2	MMOL/L	27.4 +	2.5	16.7	34.6 (731)
ESR	MM/HR	27 +	0	27	27 (1)
FIBRINOGEN	MG/DL	296 +	147	100	600 (14)
GGT	IU/L	12 +	4	0	27 (148)
LIPASE	U/L	7 +	6	0	20 (29)
PROGESTERONE	NG/DL	32.81 +	47.83	0.100	257.0 (44)
TESTOSTERONE	NG/ML	0.220 +	0.000	0.220	0.220 (1)
TOTAL T4	MCG/DL	14.5 +	7.1	9.5	19.5 (2)

E 1772.TXT

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