

Animal Profiles

Name: Jenny

Species: *Loxodonta africana*

Sex: Female

DOB: Approximately 1976-Wild caught

ISIS# 864858

N. Am Regional Studbook #141

Arrived at Dallas Zoo: 14 December 1986. Donation from Roman Schmitt.

Weight: 10,250 (4/19/05), 11,050 (9/14/06)

Reproductive History:

There have been no reproductive opportunities, neither before arriving nor at the Dallas Zoo. Reproductive assays performed in 1995 revealed atypical cycling, almost flat-line.

Temperament:

She has a past history, up through Year 2000, of being behaviorally volatile, with a low resistance to stress or change in the environment. Past history also included some stereotypic and self-abusive behavior and occasional aggressive-dominance behaviors toward a younger elephant, since departed. However since then her behavior has settled considerably, and although there is a recognized concern that her temperament could regress, she appears much calmer with responding and adapting to change in her environment. Aversive stimuli, such as increased noise and activity, can still affect her, but not to the degree they once did. She is very respectful of her current exhibit mate, Keke, and does not try to aggressively dominate her as she did in the past; in fact dominance between the two is subtle, almost even, although it can vary depending on the situation or day.

With staff, she is very keeper oriented and frequently solicits attention. In the past, this was a problem when attention was divided between two elephants. It was and is important to employ cooperative behavior modification methods through training and enrichment to mitigate any "jealousy" toward a second elephant, especially when working or treating the second elephant. She is extremely responsive to protective contact training. After a bout of cold weather, if she has recently been locked in overnight or for a period of time, she can be stubborn about being shifted and locked back inside once let out. However, she will shift readily into the stall when she knows she will not be locked in (warm weather) and for training sessions.

Behavior Profile:

Over the last 13 years Jenny's behavior has evolved from being high strung, occasionally elephant-aggressive, occasionally exhibiting stereotypic, aberrant, and sometimes self-abusive behavior, especially when locked in for long periods of time, and needing calming medication to being relatively predictable, generally calm, interacting positively with her current companion, amenable to training and interactions with keepers, and requiring no medication. This is probably due to a number of factors including a better understanding of her behavior, one system of training and management-protected contact (vs. both free and protected contact simultaneously in the late 90's), improved enrichment, a suitable mature companion, and probably maturity as well. The latter description fits her behavior since mid 2001. This was about six months after shipping out her prior younger companion, Vasha, with which she had a domineering and sometimes volatile relationship. After a short period of isolation depression, she recovered and although alone for more than two years, she behaved well and interacted positively with keepers. In September 2003 she was introduced to and has been housed since with Keke, an African cow 12 years older than Jenny. As noted her behavior has been predictable and generally calm with an excellent positive relationship with Keke as well as with staff.

Her interactions with keepers have been and are generally solicitous and positive with one unusual exception on 17 March 2002. That afternoon a trained keeper, with about a year's elephant experience, was feeding her through a protective barrier, but not under the lowest protective bar, a judgmental error. Other more experienced elephant keepers were present and reported that Jenny's demeanor was calm, in that she was making "rumbley" vocalizations, her posture was relaxed, and her eyes were half-closed in apparent contentment. Without warning she flicked the tip of her trunk approximately 6-8" upward and caught the keeper under the chin, hard enough to knock her backwards off balance and fall. There was no precursor movement like a "wind-up", which had been seen in the distant past when she swung at something. Following contact, she withdrew her trunk and the backup trainer commanded Jenny back and away from the area. At that time, Jenny's appearance and demeanor had not changed. She continued to rumble and her eyes resumed a half-shut appearance. Discussion with the staff about her behavior and their behavior within the day prior to the normal feeding session could not ascertain any obvious reason or motivation for this behavior. No other form of aggression toward keepers or toward her current companion, Keke, has been observed since, up to the time of this revision.

Medical History Notes:

In the mid to late 1990's she incurred abscesses to her right rear foot. This was a result of self trauma during aberrant stereotypic behavior resulting from being locked inside for long periods of time during reconstruction and enlargement of the exhibit. She was simultaneously placed on Acepromazine for three years at a level to settle her down without tranquilizing her; this ceased by the end of 2000 and she has not required medication nor shown self abusive behavior since.

Edema on the abdomen began appearing in the summer of 1999 during long spells of very hot weather. This has appeared each successive summer. It locates symmetrically on the abdomen ventrally and laterally with the greatest accumulation underneath centrally. There appears to be no discomfort associated with this and it resolves without treatment.

Colic has been noted occasionally but not frequently. It has a rapid onset and she will refuse grain for a day or two, but accept hay, produce and browse. Depending on the assessment of severity she may receive banamine or other treatment. Noted behaviors include lethargy, dragging her trunk or twisting it around on the ground frequently, and lying down for extended periods of time. Increasing her activity level by giving her full access to all stalls and exhibit seems to help her recover.

Jenny's right tusk is only about 8" visible beyond the sulcus and the left tusk is not visible. She keeps her tusks worn down. There is only one time in recent history in the late 1990's that she cracked a tusk where the distal 3" had to be trimmed off. Beyond that staff has not had to actively treat her tusks.

Blood samples are drawn at least monthly, if not weekly, and banked at the animal hospital. Samples have been sent off in the past for reproductive analysis and cortisol analysis.

Social Opportunities

Between 3 March 1993 – 16 November 2000 Jenny was housed with Vasha an African cow who was approximately 7 years younger than her. Partly because Jenny was so much larger and older than Vasha, Jenny was very domineering and sometimes aggressive towards Vasha. This behavior started not long after Vasha arrived, when Vasha required extensive medical treatment for an episode of salmonellosis. Thereafter Jenny would frequently displace Vasha and occasionally go after her aggressively, but never injured her; staff were able to call Jenny off Vasha and even were able to distract her when they noted behavioral precursors of aggression. In the late 1990's this behavior reduced significantly after the exhibit was reconstructed, the training and enrichment solidified, and as both animals became older with Vasha growing to an adult size. Their social relationship became more positive and cooperative the last few years until Vasha's transfer.

From November 2000 to September 2003 Jenny was housed alone.

In September 2003 the Dallas Zoo acquired Keke, a 34 year old African cow. Keke is of similar size and height to Jenny, is 8 years older, has two large tusks, and has a calm temperament with a history of being a dominant animal with good elephant interaction skills. These characteristics were thought to be a good "match" for Jenny, and fortunately that has turned out to be true. Keke was "howdied" to Jenny on exhibit with cables or the gate between them. Almost immediately the interactions were generally positive, with good vocalizations, trunk investigation and trunk wrapping and other positive behaviors. After three days they were fully introduced and continued positive and relaxed behaviors between the two.

Occasionally you will see Jenny sleeping on the ground in the presence of Keke who is standing. This suggests a good level of compatibility between the two elephants.

When in a competitive situation with Keke, Jenny will often try to exclude Keke from whatever space and resource Jenny is enjoying. When Keke persists in her pursuit of those resources, Jenny will often relent and allow Keke to utilize those resources. In cases, where Jenny does display or strike out at Keke, Keke doesn't run from her. Instead, she just stands her ground, as if nothing happened and continues her pursuit. Predominantly, this takes the form of backing, rear first into Jenny's space. Jenny will not normally escalate an aggressive response to the point where they have to be separated.

Staff generally considers Jenny to be dominant over Keke, especially for material resources, but it can change in situations where there is an external "scare" or threat and it seems Jenny seeks solace from Keke.

11/1/2006

Medical History Report - Summary for Individual Specimen
DALLAS ZOO

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LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 864858
African elephant                       Age: 30Y Est.        Birth: 16.Dec.1976
Name: JENNY
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.....2005....

- 4.Jan PROBLEM: TEETH ERUPTION - upper molar
Clinical note recorded. (TPA)
- 12.Jan PROBLEM: BLOOD COLLECTION
Clinical note recorded. (CJP)
- 20.Jan PROBLEM: BLOOD COLLECTION
Clinical note recorded. (CJP)
- 26.Jan PROBLEM: BLOOD COLLECTION
Clinical note recorded. (DJC)

- 3.Feb PROBLEM: BLOOD COLLECTION
Clinical note recorded. (CJP)
- 26.Feb PROBLEM: BLOOD COLLECTION
Clinical note recorded. (CJP)

- 29.Mar Parasitology examination: (SEMI ANNUAL EXAMINATION) Fecal sample.
NO PARASITES SEEN

- 16.Apr Urine sample analysis results: (14:00.0)
Blood sample: (15:20.0) Hematology/Chemistry/Serology results.
WBC:9.30 *10³/UL; HCT: 31.8%; BUN:14 MG/DL;
Clinical note recorded. (TNS)
- 17.Apr Clinical note recorded. (RSD)
- 18.Apr Clinical note recorded. (RSD)
- 19.Apr Clinical note recorded. (RSD)
- 20.Apr Clinical note recorded. (RSD)

- 11.Jun PROBLEM: BLOOD COLLECTION
Clinical note recorded. (SDW)

- 10.Jul PROBLEM: edema - VENTRAL (onset)
swelling - right rear foot (onset)
Clinical note recorded. (TPA)
- 13.Jul Blood sample: (10:31.0) Hematology/Chemistry/Serology results.
WBC:7.70 *10³/UL; HCT: 38.0%; BUN:11 MG/DL;
- 15.Jul PROBLEM: TRUNK WASH
Clinical note recorded. (TNS)
- 17.Jul PROBLEM: TRUNK WASH
Clinical note recorded. (TPA)
- 19.Jul PROBLEM: TRUNK WASH
Clinical note recorded. (TPA)

- 1.Aug PROBLEM: edema - VENTRAL (resolved)
- 4.Aug PROBLEM: annual examination
Clinical note recorded. (TNS)

Medical History Report - Summary for Individual Specimen
DALLAS ZOO

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African elephant                       Age: 30Y Est.        Birth: 16.Dec.1976
Name: JENNY
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.....2005....

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10.Aug  PROBLEM: swelling - right rear foot (resolved)

21.Sep  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (SDW)
26.Sep  Clinical note recorded. (TPA)
29.Sep  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (SDW)

 6.Oct  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (CJP)
19.Oct  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (CJP)
26.Oct  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (DJC)

 3.Nov  Clinical note recorded. (SDB)

 1.Dec  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (CJP)
28.Dec  Parasitology examination: (DIAGNOSTIC EXAMINATION) Fecal sample.
        NO PARASITES SEEN/OCCULT BLOOD - NEGATIVE

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 3.Jan  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (DJC)
18.Jan  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (DJC)
27.Jan  Urine sample analysis results: ( : 9.4)

 3.Mar  PROBLEM: BLOOD COLLECTION
        Clinical note recorded. (DJC)
11.Mar  PROBLEM: nail infection - left rear digit 1 (onset)
        Clinical note recorded. (TNS)
22.Mar  Clinical note recorded. (TNS)
24.Mar  Clinical note recorded. (TNS)
29.Mar  Clinical note recorded. (TNS)

 1.Apr  Clinical note recorded. (TNS)
 5.Apr  Clinical note recorded. (JAR)
 8.Apr  Clinical note recorded. (JAR)
 9.Apr  Clinical note recorded. (TNS)
10.Apr  Clinical note recorded. (JAR)
16.Apr  Clinical note recorded. (JAR)

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Medical History Report - Summary for Individual Specimen
DALLAS ZOO

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LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 864858
African elephant                       Age: 30Y Est.        Birth: 16.Dec.1976
Name: JENNY
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.....2006....

- 17.Apr Clinical note recorded. (JAR)
- 30.Apr Clinical note recorded. (JAR)

- 10.May Clinical note recorded. (JAR)
- 15.May PROBLEM: nail infection - left rear digit 1 (resolved)
- 27.May Clinical note recorded. (JAR)

- 7.Jun PROBLEM: wound - left tusk sulcus (onset)
Clinical note recorded. (TNS)
- 15.Jun Clinical note recorded. (JAR)
- 23.Jun Clinical note recorded. (TNS)
- 25.Jun PROBLEM: wound - left tusk sulcus (resolved)

- 25.Jul Clinical note recorded. (JAR)
- 29.Jul Clinical note recorded. (JAR)

- 1.Aug PROBLEM: abnormal behavior (onset)
ABNORMAL FECES (onset)
PAIN (onset)
Clinical note recorded. (TPA)
- 2.Aug PROBLEM: abnormal behavior (resolved)
PAIN (resolved)
BLOOD COLLECTION
Clinical note recorded. (JAR)
- 5.Aug PROBLEM: ABNORMAL FECES (resolved)
Clinical note recorded. (JAR)
- 24.Aug PROBLEM: BLOOD COLLECTION
Clinical note recorded. (DJC)

- 6.Sep PROBLEM: BLOOD COLLECTION
Clinical note recorded. (DJC)
Clinical note recorded. (JAR)
- 7.Sep Blood sample: (3:29.0) Hematology/Chemistry/Serology results.
WBC:14.20 *10³/UL; HCT: 37.0%; BUN:12 MG/DL;
- 15.Sep PROBLEM: TRUNK WASH
Clinical note recorded. (TNS)
- 17.Sep PROBLEM: TRUNK WASH
Clinical note recorded. (TNS)
- 19.Sep PROBLEM: TRUNK WASH
Clinical note recorded. (TNS)
- 20.Sep PROBLEM: vaccination - VEWT
Clinical note recorded. (TNS)

- 30.Oct Parasitology examination: (SEMI ANNUAL EXAMINATION) Fecal sample.

Medical History Report - Summary for Individual Specimen
DALLAS ZOO

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LOXODONTA AFRICANA (no subsp) Sex: Female Acc. #: 864858
African elephant Age: 30Y Est. Birth: 16.Dec.1976
Name: JENNY
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.....2006...

- 30.Oct CILIATED/NO PARASITES SEEN

- 2.Nov PROBLEM: BLOOD COLLECTION
 Clinical note recorded. (DJC)
- 20.Nov Clinical note recorded. (JAR)

- 21.Dec Clinical note recorded. (JAR)
- 28.Dec Clinical note recorded. (JAR)

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<i>LOXODONTA AFRICANA</i> (no subsp)	Sex: Female	Acc. #: 864858
African elephant	Age: 30Y Est.	Birth: 16.Dec.1976
Name: JENNY		

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Clinical Note: 4.Jan.2005
Problem: TEETH ERUPTION - upper molar (Confirmed)
Observation:
Maxillary molars are starting to erupt. Digital image provided. (TPA)

Clinical Note: 12.Jan.2005
Problem: BLOOD COLLECTION
Positive reinforcement for blood draw by keepers
Serum banked in u/l for AZA and DZ. (CJP)

Clinical Note: 20.Jan.2005
Problem: BLOOD COLLECTION
Procedure: Positive reinforcement for blood draw by keepers
Serum banked in u/l for AZA and DZ. (CJP)

Clinical Note: 26.Jan.2005
Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood draw by keepers.
Serum banked in u/l for AZA and DZ. (DJC)

Clinical Note: 3.Feb.2005
Problem: BLOOD COLLECTION
Procedure: Positive reinforcement for blood draw by keepers.
Serum banked in u/l for AZA and DZ. (CJP)

Clinical Note: 26.Feb.2005
Problem: BLOOD COLLECTION
Procedure: Positive reinforcement for blood draw by keepers.
Serum banked in u/l for AZA and DZ. (CJP)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY
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Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976
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Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: SEMI ANNUAL EXAMINATION

Sample id.: 2005-0349
Date collected: 29.Mar.2005
Time collected: 11:00
Collected by: MC

Collected from:

Group of specimens housed together.

Enclosure: ZNMLM7B

Examination Data >>

Storage: refrigerated
Consistency: soft
Gross appearance: Typical

Date examined: 29.Mar.2005
at: 14:00
by: CJP

Tests & Results >>

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

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

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Clinical Note:

16.Apr.2005

Observation:

On 14 Apr 05 there was an incident at the large mammal barn: a small fire on the outside of the building in the giraffe holding yard was easily extinguished but 911 was called and firetrucks were brought in alongside the elephant exhibit. Jenny was fairly distressed by the commotion. Yesterday she was depressed and laying down some.

Today Jenny is markedly depressed and poorly responsive to keepers. She is anorexic and is not defecating or urinating. She is restless, and is up and down often, spending half the time laying on her side or in a "half-recumbent" posture, with her rear legs down and belly resting on the ground. Other times she stands leaning against the wall or standing with her head resting on the wall. She was brought inside to allow interactions and procedures if necessary. She is not interested in treats or any food items. She was encouraged to drink from hose but refused. Keeper hosed her for a bath but she shied away from this too. Requested blood for diagnostics, multiple attempts unsuccessful due to lack of interest in food items.

Rx: Banamine: 3.0 g PO SID x 3 days

1 p.m.: Successful blood draw from ear. Submitted for CBC/Chemistries, EMCV/WNV/Herpesvirus titers. Collected feces (normal consistency and appearance) for O/P, Occult blood, and AAF + Salmonella/Campy culture (and frozen per TPA for viral panel submission). Collected urine from floor for UA.

Successfully encouraged her to drink around 5 gallons dilute gatorade. Still no appetite. Unable to administer banamine. Activity and demeanor unchanged: very sleepy looking, with eyes closed often (even when interacting with keepers), restless, shifting from foot to foot. Used thermography unit: surface temperature = 85 degrees F (same for Keke)

4 p.m.: Attempted to administer IM or IV banamine (2000 mg) and butorphanol (100 mg). Single attempt at IM administration in R rear leg--unsuccessful. Multiple attempts to repeat venipuncture in ear to allow IV drug administration--unsuccessful. Jenny is very wary and tired of sessions. Her demeanor is somewhat improved since 1 p.m., much more interactive and responsive to keepers, but is clearly still uncomfortable and distracted.

Comment:

Nightkeepers to check every 2 hours and offer oral fluids (and browse, hay, alfalfa, or produce) every 4 hours. To phone if recumbent for

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

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Clinical Note:

16.Apr.2005

extended period, non-responsive, or if diarrhea develops. May need to
dart with medications if does not consume oral. (TNS)

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

Collection Information >>
Health Status: Abnormal

Date of Collection: 16.Apr.2005
Time of Collection: 14:00.0
Collected by: TNS
Sample Collection Site: from Floor

Analysis Information >>
Sample type: Urine
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: DALLAS ZOO LAB
Date of Analysis: 16.Apr.2005
Time of Analysis: 16:00
Analysis by: CJP
Manual analysis.

Tests and Results >>

SPECIFIC GRAVITY (REFRACTOMETER)	1.006	
URINE - GLUCOSE	NEG	MG/DL
URINE APPEARANCE	CLOUDY	
URINE COLOR	DK YEL	
URINE, BILIRUBIN	NEG	
URINE, BLOOD	TRACE	ERY/UL
URINE, KETONE	NEG	MG/DL
URINE, LEUKOCYTES	NEG	LEUCO/UL
URINE, MYOGLOBIN	NEG	
URINE, NITRITE	STRNG+	
URINE, PH	8.0	
URINE, PROTEIN	NEG	MG/DL
URINE, UROBILINOGEN	0.2	MG/DL

Comments >>

Flagellate protozoa rare
spirochete bacteria 1+
amorphous crystals (probably Ca. Carbonate) TNTC
bacteria 4+
debris 2+

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

Collection Information >>

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

Date of Collection: 16.Apr.2005
Time of Collection: 15:20.0
Collected by:

Hematology >>

Analysis Information >>

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

Laboratory: METHODIST HOSP
Date of Analysis: 16.Apr.2005
Time of Analysis: 15:20
Analysis by:
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	9.3		*10 ³ /UL
RED BLOOD CELL COUNT	< 2.73		*10 ⁶ /UL
HEMOGLOBIN	13.0		GM/DL
HEMATOCRIT	< 31.8		%
MCV	< 116		fL
MCH	> 47.6		uug
MCHC	>> 40.9		gm/dL
SEGMENTED NEUTROPHILS	46.81	(4.353)	% (*10 ³ /UL)
LYMPHOCYTES	43.62	(4.057)	% (*10 ³ /UL)
MONOCYTES	9.57	(0.890)	% (*10 ³ /UL)
EOSINOPHILS	0.00		% (*10 ³ /UL)
BASOPHILS	0.00		% (*10 ³ /UL)
PLATELET COUNT	> 725		*10 ³ /UL
MEAN CORPUSCULAR HEMOGLOBIN	47.5		PG
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION	40.8		%
MEAN CORPUSCULAR VOLUME	116.4		FL

Morphology Results >>

ANISOCYTOSIS 1+, POLYCHROMAS. 1+, MACROCYTOSIS 3+

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

Collection Information >>

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

Date of Collection: 16.Apr.2005

Time of Collection: 15:20.0

Collected by:

Chemistry >>

Analysis Information >>

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

Laboratory: METHODIST HOSP

Date of Analysis: 16.Apr.2005

Time of Analysis: 15:20

Analysis by:

Automated analysis.

Tests and Results >>

GLUCOSE	87	MG/DL
BLOOD UREA NITROGEN >	14	MG/DL
CREATININE	1.2	MG/DL
BUN/creatinine ratio	11.7	
CALCIUM <<	9.6	MG/DL
PHOSPHORUS <	3.8	MG/DL
calcium/phosphorus ratio	2.53	
SODIUM	127	MEQ/L
POTASSIUM <<	3.3	MEQ/L
sodium/potassium ratio	38.5	
CHLORIDE	87	MEQ/L
CHOLESTEROL <	44	MG/DL
TRIGLYCERIDE <	10	MG/DL
TOTAL PROTEIN (COLORIMETRY) <	7.0	GM/DL
ALBUMIN (COLORIMETRY) <	3.0	GM/DL
GLOBULIN (COLORIMETRY)	4.0	GM/DL
albumin/globulin ratio	0.750	
ASPARTATE AMINOTRANSFERASE <	10	IU/L
ALANINE AMINOTRANSFERASE	<3	IU/L
TOTAL BILIRUBIN	0.2	MG/DL
ALKALINE PHOSPHATASE	68	IU/L
CREATINE PHOSPHOKINASE <	1.2	IU/L
OSMOLARITY <	254	MOSMOL/L
BUN/CREATININE RATIO	11.70	

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Acc. #: 864858
Birth: 16.Dec.1976

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Clinical Note:

17.Apr.2005

Observation:

In the morning Jenny was considered improved from yesterday, but still not normal. She was lethargic, with decreased appetite. She was noted to take food into her mouth, chew it and spit it out. The keepers reported that when she would eat, she would take very small mouthfuls. She did not drink an appreciable amount overnight. Produced feces and urine, which grossly appeared normal. By 1 pm Jenny appeared very uncomfortable and restless. She was up and down frequently and was obviously distressed. Butorphanol 80 mg was administered IM via dart in the left triceps region and within 10 minutes she was visibly more comfortable and willing to take food items from the keepers. The prescribed banamine dose was administered orally after the dart. Plan to keep under observation and modify therapy as needed.

RX:

Butorphanol: 80 mg IM via dart. (RSD)

Clinical Note:

18.Apr.2005

Observation:

Jenny appears much improved today. She is eating better, drinking some gatorade/water, and in general more alert and responsive. She took her banamine dose readily this morning.

Instructed keepers to sift through her droppings in case a foreign body passes. Otherwise, we need to keep her under close observation until this episode completely resolves. (RSD)

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Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

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Clinical Note:

19.Apr.2005

Observation:

Jenny continues to improve. The keepers report that she is still not drinking as much as she normally does, but is otherwise normal in behavior. The 1st nail (most medial) on each hind foot is slightly abnormal in appearance with the cuticle appearing overgrown. This does not seem to be causing her any problems, and the keepers are trying to work on trimming /cleaning the area.

OK'd access to the exhibit. Asked that she not be offered any grain yet. Keep up up with banamine therapy through today. (RSD)

Clinical Note:

20.Apr.2005

Observation:

Jenny is much improved and essentially back to normal. Complete access to the exhibit was OK'd. I requested that she be given a half ration of grain and alfalfa today, if she does well with that she can go to a full ration tomorrow.

Banamine is to be discontinued today. (RSD)

Clinical Note:

11.Jun.2005

Problem: BLOOD COLLECTION

Procedure:

Blood collected by section keepers for serum storage. (SDW)

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Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

Clinical Note:

10.Jul.2005

Problem: edema - VENTRAL (Confirmed); swelling - right rear foot
(Confirmed)

Observation:

There is a mild swelling on the lateral aspect of the right ankle that was first noticed 48-72 hours ago. Elephant is not favoring this leg. Swelling is not warm to the touch and may be painful/irritating (?) on palpation.

"Jenny" would not let me come close enough to palpate area.

"Jenny" has been having another bout of ventral edema for the past few weeks. The edema has formed a basketball sized mass on the caudal ventral midline. The mass is very different from her previous bouts, which have been more diffuse in the past.

Comment:

KUO at this time. Should consider hydrotherapy for both problems. (TPA)

Clinical Pathology Records - Specimen Report
DALLAS ZOO

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African elephant                         Age: 30Y Est.        Birth: 16.Dec.1976
Name: JENNY
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Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Manual restraint used.

Date of Collection: 13.Jul.2005
Time of Collection: 10:31.0
Collected by:

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

Laboratory: ANTECH LG ANIMA
Date of Analysis: 13.Jul.2005
Time of Analysis: 10:31
Analysis by:
Automated analysis.

```

Tests and Results >>

```

WHITE BLOOD CELL COUNT < 7.7 *10^3/UL
RED BLOOD CELL COUNT 2.8 *10^6/UL
HEMOGLOBIN 12.8 GM/DL
HEMATOCRIT 38 %
MCV > 136 fL
MCH 45.7 uug
MCHC 33.7 gm/dL
SEGMENTED NEUTROPHILS 33 (2.541) % (*10^3/UL)
LYMPHOCYTES < 21 (1.617) % (*10^3/UL)
MONOCYTES > 44 (3.388) % (*10^3/UL)
EOSINOPHILS 1 (0.077) % (*10^3/UL)
BASOPHILS 1 (0.077) % (*10^3/UL)
ESTIMATED PLATELET COUNT ADEQ
PLATELET COUNT 225 *10^3/UL
FIBRINOGEN 100 MG/DL
RBC MORPHOLOGY NORMAL

```

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

Collection Information >>

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

Date of Collection: 13.Jul.2005
Time of Collection: 10:31.0
Collected by:

Chemistry >>

Analysis Information >>

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

Laboratory: ANTECH LG ANIMA
Date of Analysis: 13.Jul.2005
Time of Analysis: 10:31
Analysis by:
Automated analysis.

Tests and Results >>

GLUCOSE	90	MG/DL
BLOOD UREA NITROGEN	11	MG/DL
CREATININE	1.4	MG/DL
BUN/creatinine ratio	7.86	
CALCIUM	10.7	MG/DL
PHOSPHORUS	4.9	MG/DL
calcium/phosphorus ratio	2.18	
SODIUM	127	MEQ/L
POTASSIUM	4.8	MEQ/L
sodium/potassium ratio	26.5	
CHLORIDE	88	MEQ/L
MAGNESIUM	2.4	MG/DL
CHOLESTEROL	63	MG/DL
TOTAL PROTEIN (COLORIMETRY)	7.4	GM/DL
ALBUMIN (COLORIMETRY)	< 2.9	GM/DL
GLOBULIN (COLORIMETRY)	4.5	GM/DL
albumin/globulin ratio	0.644	
ASPARTATE AMINOTRANSFERASE	< 13	IU/L
TOTAL BILIRUBIN	0.1	MG/DL
ALKALINE PHOSPHATASE	71	IU/L
CREATINE PHOSPHOKINASE	167	IU/L
ALBUMIN GLOBULIN RATIO	0.6	
BUN/CREATININE RATIO	8	
GAMMA GLUTAMYLTRANSFERASE	15	IU/L
SODIUM/POTASSIUM RATIO	26	

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

=====

Clinical Note: 15.Jul.2005

Problem: edema - VENTRAL (Confirmed); swelling - right rear foot
(Confirmed); TRUNK WASH

Procedure:

Positive reinforcement training session

Trunk wash #1: 120 ml retrieved and frozen for culture at NVSL. (TNS)

Clinical Note: 17.Jul.2005

Problem: edema - VENTRAL (Confirmed); swelling - right rear foot
(Confirmed); TRUNK WASH

Procedure:

Positive reinforcement for procedure.

Trunk wash (120 mls) recovered for culture and frozen for culture at
NVSL. (TPA)

Clinical Note: 19.Jul.2005

Problem: edema - VENTRAL (Confirmed); swelling - right rear foot
(Confirmed); TRUNK WASH

Procedure:

Positive reinforcement for procedure.

Trunk wash (120 mls) recovered for culture and frozen for culture at
NVSL. (TPA)

Clinical Note: 4.Aug.2005

Problem: swelling - right rear foot (Confirmed); annual examination

Procedure:

Positive reinforcement session

Annual physical exam

Observation:

Very cooperative, good session. No abnormalities noted on external,
ophthalmic, otic, oral, dental, or foot exams, or on thoracic or
abdominal auscultation. All feet in very good condition. The ventral
edema is largely resolved, though there is some residual sagging of
skin in this area. The swollen area of the right rear foot is not
evident at this time.

Not possible to do vaccination today. Will do this soon. (TNS)

=====

<i>LOXODONTA AFRICANA</i> (no subsp)	Sex: Female	Acc. #: 864858
African elephant	Age: 30Y Est.	Birth: 16.Dec.1976
Name: JENNY		

=====

Clinical Note: 21.Sep.2005
Problem: BLOOD COLLECTION
Procedure:
Blood collected by section keepers for serum storage. (SDW)

Clinical Note: 26.Sep.2005
Observation: NVSL MYCOBACTERIOLOGY REPORT.

15 Jul 05.
Mycobacterial Isolation:
No Isolation Made.
Specimen Submitted: Trunk Wash.

17 Jul 05.
Mycobacterial Isolation:
No Isolation Made.
Specimen Submitted: Trunk Wash.

19 Jul 05.
Mycobacterial Isolation:
No Isolation Made.
Specimen Submitted: Trunk Wash. (TPA)

Clinical Note: 29.Sep.2005
Problem: BLOOD COLLECTION
Procedure:
Blood collected by section keepers for serum storage. (SDW)

Clinical Note: 6.Oct.2005
Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood draw by keepers
Serum banked in u/l for AZA and DZ. (CJP)

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

Clinical Note: 19.Oct.2005

Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood draw by keepers
Serum banked in u/l for AZA and DZ. (CJP)

Clinical Note: 26.Oct.2005

Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood collection. (DJC)

Clinical Note: 3.Nov.2005

Procedure:
Blood collected by section keepers for serum storage. (SDB)

Clinical Note: 1.Dec.2005

Problem: BLOOD COLLECTION
Procedure:
Blood collected by section keepers for serum storage. (CJP)

Submission Data >>

Type: Fecal sample
Purpose: DIAGNOSTIC EXAMINATION

Sample id.: 2005-0391
Date collected: 28.Dec.2005
Time collected: 10:00
Collected by: EMK

Collected from:

Group of specimens housed together.

Enclosure: ZNPMH1-2

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Atypical

Date examined: 28.Dec.2005
at: 14:00
by: DJC

Tests & Results >>

DIRECT MICROSCOPIC EXAMINATION NO PARASITES SEEN
FLOATATION - NA NITRATE NO PARASITES SEEN
OCCULT BLOOD NEGATIVE

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

=====

Clinical Note:

3.Jan.2006

Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood collection (DJC)

Clinical Note:

18.Jan.2006

Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood collection (DJC)

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

Collection Information >>
Health Status: Abnormal

Date of Collection: 27.Jan.2006
Time of Collection: : 9.4
Collected by: AMM
Sample Collection Site: Mid-stream catch

Analysis Information >>
Sample type: Urine
Storage: Fresh
Sample Quality: No quality problems.

Laboratory: DALLAS ZOO LAB
Date of Analysis: 27.Jul.2006
Time of Analysis: 15:00
Analysis by: AMM
Manual analysis.

Tests and Results >>

SPECIFIC GRAVITY (REFRACTOMETER)	1.026	
URINE - GLUCOSE	NORMAL	MG/DL
URINE APPEARANCE	CLOUDY	
URINE COLOR	LT YEL	
URINE, BILIRUBIN	NEG	
URINE, BLOOD	NEG	ERY/UL
URINE, KETONE	NEG	MG/DL
URINE, LEUKOCYTES	NEG	LEUCO/UL
URINE, NITRITE	NEG	
URINE, PH	7	
URINE, PROTEIN	NEG	MG/DL
URINE, UROBILINOGEN	NORMAL	MG/DL

Comments >>

Cytological/Microscopic

Bacteria-1x
WBC-2X
Some Debris

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

=====

Clinical Note: 3.Mar.2006

Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood collection (DJC)

Clinical Note: 11.Mar.2006

Problem: nail infection - left rear digit 1 (Suspected)
Observation:
Crack in left rear medial nail noted by keepers. Pared out and noted underlying soft area. Does not appear necrotic. Recommended daily incremental trimming to eliminate soft areas. (TNS)

Clinical Note: 22.Mar.2006

Problem: nail infection - left rear digit 1 (Suspected)
Observation:
Just returned from vacation and have not seen this elephant's foot since 3/11. Keeper staff and DVM have been trimming affected nail--there are now areas on both the medial and lateral sides of the nail that are affected, and have been radically trimmed away. (TNS)

Clinical Note: 24.Mar.2006

Problem: nail infection - left rear digit 1 (Suspected)
Observation:
Continuing to trim nail and soak foot. (TNS)

Clinical Note: 29.Mar.2006

Problem: nail infection - left rear digit 1 (Suspected)
Observation:
Affected nail is looking good--continuing to focally trim abnormal areas on daily basis, as well as soaking. (TNS)

Clinical Note: 1.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)
Observation:
There continues to be macerated or soft areas on both medial and lateral aspects of left rear digit 1, associated with the trimming. Suspect daily soaking is causing some of this maceration. (TNS)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

=====

Clinical Note:

5.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)
Procedure:
Operant conditioning for foot presentation

Observation:

The spongy area on either side of left medial rear nail has improved; however, it does appear to have penetrated beneath the nail. There is a "bridge" of seemingly healthy tissue that connects nail to digital pad, told keepers that we want to keep that area as healthy as possible. Continue trimming, in addition to reinstating betadine spray as well as packing areas on either side of nail with betadine soaked gauze to provide deeper penetration. (JAR)

Clinical Note:

8.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)
Procedure:
Operant conditioning for foot presentation

Observation:

The spongy area on either side of left medial rear nail is worsening. The area between digital pad and nail is now more necrotic and friable. Need to perform aggressive trimming to resolve this but removal of this tissue will potentially severely compromise the integrity of the nail. It will be more likely to break off. Having keepers continue betadine soaks in further attempts to dry area. The stall that Jenny is in collects water so this area is almost continually under water except when she is on exhibit. The medial right rear nail is beginning to show a similar area but still in early stages-keepers are to perform aggressive but discreet trimmings of this foot-i.e. only remove necrotic or affected tissue. (JAR)

Clinical Note:

9.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)
Rx (JAR):
Dilute Betadine solution: soak both rear feet for 15 min BID for 14 days. (TNS)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

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Clinical Note:

10.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)

Observation:

Dr. Alvarado evaluated and recommended shaving nail with nail bed to keep from undermining nail too severely.

Rx:

Epsom salts: 4 c to 1 gallon SID soaking in AM
CHX solution: 3 oz to 1 gallon SID soaking in PM
Amoxicillin: 55 g PO SID for 14 days (JAR)

Clinical Note:

16.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)

Procedure:

Operant conditioning for nail bed trimming

Observation:

Left digit is much improved. Approximately 80% of nail has been removed in addition to nail bed and there is very little necrotic tissue still present. Jenny shows no lameness on this foot or the right foot which is also improved in gross appearance. (JAR)

Clinical Note:

17.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)

Procedure:

Operant conditioning for nail bed trimming

Observation:

There is more necrotic tissue present in center of nail bed today. It is an area approximately 2 mm by 3 mm. Trimmed this area aggressively but was unable to clear it all. A small dot of very pink tissue was visible so opted to stop at this point. Taking soaks well but refusing even the dummy gelcaps. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

=====

Clinical Note:

30.Apr.2006

Problem: nail infection - left rear digit 1 (Suspected)
Procedure:
Operant conditioning for nail bed examination

Observation:

Looks really good. There is a small area of softness in center of nail but keepers had just soaked foot in Nolvasan so possibly has contributed to softness. Recheck tomorrow before soaking. (JAR)

Clinical Note:

10.May.2006

Problem: nail infection - left rear digit 1 (Suspected)
Procedure:
Operant conditioning for nail bed examination

Observation:

Appears to have completely resolved. No areas of softness noted on either foot. (JAR)

Clinical Note:

27.May.2006

Observation: ANTECH

Cytology of discharge from Left Sulcus:

Diagnosis: Tissue Necrosis with Bacteria Overgrowth (JAR)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

=====

Clinical Note: 7.Jun.2006

Problem: wound - left tusk sulcus (Confirmed)

Procedure:

Operant conditioning session

Physical exam

Swab of wound for cytology/culture

Observation:

This elephant has an apparent wound/laceration in the sulcus at the base of the left tusk, with purulent debris present. Obtained swab for cytology and culture, and debrided.

Rx:

Chlorhexidine scrub: cleanse wound once daily, then rinse thoroughly for 21 days

SSD ointment: apply after cleaning, once daily for 21 day (TNS)

Clinical Note: 15.Jun.2006

Problem: wound - left tusk sulcus (Confirmed)

Observation:

Sulcus looks very clean and dry today. No discharge has been noted for over 4 days. Keepers are to continue therapy for 7 more days-then re-evaluate for possible discontinuance of treatment. (JAR)

Clinical Note: 23.Jun.2006

Problem: wound - left tusk sulcus (Confirmed)

Observation:

Tusk sulcus wound appears to be completely healed--discontinue treatments. (TNS)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

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Clinical Note:

25.Jul.2006

Northwest ZooPath
654 W. Main St.
Monroe, WA 98272
Phone (360) 794-0630
Fax (360) 794-4312
E-mail: zoopath@aol.com

Case No.: G06-3285
Tissues obtained: 07/18/06
Received: 07/21, reported 07/25/06

Patient ID: African Elephant #864858
Dallas Zoo
Account #: TX 131G

HISTORY: Abnormal tissue was noted in the nail beds of the left rear footpad and the right rear footpad, and biopsies from each location are submitted.

CLINICAL DIAGNOSIS: Open.

GROSS: Received are two containers of formalin. Container #1 is labeled "right front foot" and has three tissues to 2 cm. in greatest dimension that are processed in block #1. Container #2 is labeled "left front foot" and has three tissues to 2 cm. in greatest dimension that are processed in block #2.

MICROSCOPIC: Histologic changes are identical in both locations and are comprised of thick laminated and variably degenerative keratin and keratinaceous horn associated with marked bacterial colonization and gas formation. The bacteria appear to be a mixed population of rods and bacilli.

DIAGNOSIS: Keratin degeneration with bacterial colonization, epidermis of footpads.

COMMENT: Histologic changes in these specimens are typical of the opportunistic bacterial infections that occur in the footpads of captive elephants. This is likely a mixed population of bacteria, some of which

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

=====

Clinical Note:

25.Jul.2006

are gas producers. It is important to rule out concurrent fungal infection, as this can be a difficult management problem. Fungal stains are pending on tissues from both locations, and an addendum will follow in this regard.

Michael M. Garner, DVM, Dipl. ACVP

MMG/hc

E-mail: Zoopath@aol.com

NZP Code: M, 9a; bacterial epidermitis, footpads. (JAR)

Clinical Note:

29.Jul.2006

Addendum, 07/29/06: A fungal stain (GMS) is negative for fungal elements in all tissues from both blocks.

Michael M. Garner, DVM, Dipl. ACVP

MMG/hc

E-mail: Zoopath@aol.com

NZP Code: M, 9a; bacterial epidermitis, footpads. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

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Clinical Note:

1.Aug.2006

Problem: abnormal behavior (Confirmed); ABNORMAL FECES (Confirmed); PAIN (Suspected)

Observation:

Approx. 6 PM found down in exhibit in left lateral recumbency. Would not respond to night keepers. Elephant stood a few minutes before I arrived and walked into stall. Walked outside and went into left lateral recumbency. In left lateral recumbency, right flank is severely distended. She passed soft feces while in lateral recumbency. Would not stand to defecate.

Increased amount of soft feces around exhibit.

Keepers had noted that she was passing a lot of gas during the day. Appetite normal during the day.

Both elephants had been locked inside this morning while welding was going on outside. We are in the middle of another heat wave with temperatures over 100 daily.

Brought inside and darted.

RX:

Butorphanol: 100 mg IM by dart- received 50%.
Butorphanol: 50 mg IM by dart.
Banamine: 500 mg IM by dart- received 80%.

Comment:

Check hourly during the night. Offer electrolytes and water ad lib.

Ssuspect that this may be heat and stress related. KUO at this time. (TPA)

Clinical Note:

2.Aug.2006

Problem: abnormal behavior (Confirmed); ABNORMAL FECES (Confirmed); PAIN (Suspected); BLOOD COLLECTION

Observation: ANTECH

Chem: No significant abnormalities (JAR)

=====

<i>LOXODONTA AFRICANA</i> (no subsp)	Sex: Female	Acc. #: 864858
African elephant	Age: 30Y Est.	Birth: 16.Dec.1976
Name: JENNY		

=====

Clinical Note: 5.Aug.2006
Problem: ABNORMAL FECES (Confirmed)
Observation:
Behavior is back to normal-normal fecal production and appetite.
Approved to go onto 1/2 grain ration with continued increase in grain
offered as continues to do well. (JAR)

Clinical Note: 24.Aug.2006
Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood collection (DJC)

Clinical Note: 6.Sep.2006
Problem: BLOOD COLLECTION
Procedure:
Positive reinforcement for blood collection
CBC/Chem sent in (DJC)

Clinical Note: 6.Sep.2006
Problem: BLOOD COLLECTION
Observation: ANTECH

CBC: WNL

Chem: No significant abnormalities (JAR)

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

Collection Information >>

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

Date of Collection: 7.Sep.2006
Time of Collection: 3:29.0
Collected by:

Hematology >>

Analysis Information >>

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

Laboratory: ANTECH LG ANIMA
Date of Analysis: 7.Sep.2006
Time of Analysis: 3:29
Analysis by:
Automated analysis.

Tests and Results >>

WHITE BLOOD CELL COUNT	>	14.2		*10 ³ /UL
RED BLOOD CELL COUNT		3.0		*10 ⁶ /UL
HEMOGLOBIN		12.4		GM/DL
HEMATOCRIT		37		%
MCV		123		fL
MCH		41.3		uug
MCHC		33.5		gm/dL
SEGMENTED NEUTROPHILS	>>	49.49	(7.028)	% (*10 ³ /UL)
LYMPHOCYTES		45.36	(6.441)	% (*10 ³ /UL)
MONOCYTES		4.12	(0.585)	% (*10 ³ /UL)
EOSINOPHILS		1.03	(0.146)	% (*10 ³ /UL)
BASOPHILS		0.00		% (*10 ³ /UL)
ESTIMATED PLATELET COUNT			ADEQ	
PLATELET COUNT	>>	1162		*10 ³ /UL
FIBRINOGEN		100		MG/DL

Morphology Results >>

ANISOCYTOSIS +2

Clinical Pathology Records - Specimen Report
DALLAS ZOO

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=====
LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 864858
African elephant                         Age: 30Y Est.        Birth: 16.Dec.1976
Name: JENNY
=====

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

Date of Collection: 7.Sep.2006
 Time of Collection: 3:29.0
 Collected by:

Chemistry >>

Analysis Information >>

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

Laboratory: ANTECH LG ANIMA
 Date of Analysis: 7.Sep.2006
 Time of Analysis: 3:29
 Analysis by:
 Automated analysis.

Tests and Results >>

GLUCOSE	> 109	MG/DL
BLOOD UREA NITROGEN	12	MG/DL
CREATININE	1.3	MG/DL
BUN/creatinine ratio	9.23	
CALCIUM	10.9	MG/DL
PHOSPHORUS	4.8	MG/DL
calcium/phosphorus ratio	2.27	
SODIUM	127	MEQ/L
POTASSIUM	4.9	MEQ/L
sodium/potassium ratio	25.9	
CHLORIDE	88	MEQ/L
MAGNESIUM	2.6	MG/DL
CHOLESTEROL	56	MG/DL
TOTAL PROTEIN (COLORIMETRY)	7.7	GM/DL
ALBUMIN (COLORIMETRY)	3.2	GM/DL
GLOBULIN (COLORIMETRY)	4.5	GM/DL
albumin/globulin ratio	0.711	
ASPARTATE AMINOTRANSFERASE	18	IU/L
TOTAL BILIRUBIN	0.1	MG/DL
ALKALINE PHOSPHATASE	70	IU/L
CREATINE PHOSPHOKINASE	171	IU/L
ALBUMIN GLOBULIN RATIO	0.7	
BUN/CREATININE RATIO	9	
GAMMA GLUTAMYLTRANSFERASE	11	IU/L
SODIUM/POTASSIUM RATIO	26	

=====
LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976
=====

Clinical Note:

15.Sep.2006

Problem: TRUNK WASH
Procedure:
Positive reinforcement session
Trunk wash for Mycobacterial culture #1 (TNS)

Clinical Note:

17.Sep.2006

Problem: TRUNK WASH
Procedure:
Positive reinforcement session
Trunk wash for Mycobacterial culture #2 (TNS)

Clinical Note:

19.Sep.2006

Problem: TRUNK WASH
Procedure:
Positive reinforcement session
Trunk wash for Mycobacterial culture #3 (TNS)

Clinical Note:

20.Sep.2006

Problem: vaccination - VEWT
Procedure:
Positive reinforcement session
Vaccination (by keeper)

Rx:
VEWT vaccine: 2.0 ml IM triceps (TNS)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

=====

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

=====

Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: SEMI ANNUAL EXAMINATION

Sample id.: 2006-0856
Date collected: 30.Oct.2006
Time collected: 8:45
Collected by: AA

Collected from:

From an individual specimen.

Enclosure: ZNMLM7B

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Typical

Date examined: 30.Oct.2006
at: 14:00
by: CJP

Tests & Results >>

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

OCC

Clinical Note:

2.Nov.2006

Problem: BLOOD COLLECTION

Procedure:

Positive reinforcement for blood collection by keeper (DJC)

=====

LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female Acc. #: 864858
Age: 30Y Est. Birth: 16.Dec.1976

=====

Clinical Note:

20.Nov.2006

Observation: NVSL MYCOBACTERIOLOGY REPORT.

15 Sept 06.

Mycobacterial Isolation:
No Isolation Made.
Specimen Submitted: Trunk Wash.

17 Sept 06.

Mycobacterial Isolation:
No Isolation Made.
Specimen Submitted: Trunk Wash.

18 Sept 06.

Mycobacterial Isolation:
No Isolation Made.
Specimen Submitted: Trunk Wash. (JAR)

Clinical Note:

21.Dec.2006

Observation:

This is the first time I have seen Jenny's feet in approximately 3 weeks, there is some improvement around the perimeter of the pad but definite worsening along leading edge of sole. The medial nail that was problematic last year is worse again and the keepers are aggressively trimming. While there noted a pit starting in adjacent nail that had a necrotic center, when trimmed out there was healthy tissue underneath. There is necrotic appearing tissue but when trimmed it is a very thin layer, the pad itself is also very thin. Does not appear to have the growth rate that it usually does. What worsens the situation is when Jenny urinates there is a good deal of urine that splashes onto feet in exactly the areas that are worsening. May be a version of urine scald? Need to find another topical therapy other than CHX or Tea Tree. Don't feel like she is getting benefit from either one at this time. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: JENNY

Sex: Female
Age: 30Y Est.

Acc. #: 864858
Birth: 16.Dec.1976

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Clinical Note:

28.Dec.2006

Procedure:

Operant conditioning for pedal exam
Trimming of affected areas by Dr. A

Observation:

Discussed trimming regimen with Large Mammal crew, need to try and remove as much necrotic tissue as possible without compromising pad integrity. Start new disinfection soaking regimen to see if will dry out nail beds and sole.

Rx:

Virkon-S: Mix a solution at 45g/1 gallon H2O, soak all feet at least 15 minutes in the AM once daily
Epson Salts: Mix 4 c/gallon soak all feet at least 15 minutes in the PM once daily. (JAR)

Clinical Pathology Records Report - ISIS/In-House Reference Values
DALLAS ZOO

Scientific name: *LOXODONTA AFRICANA*
Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	10.50 ±	2.648	4.500	22.10	(1544)
RBC	*10 ⁶ /UL	3.15 ±	0.40	2.05	4.80	(1480)
HGB	GM/DL	13.7 ±	1.6	7.0	26.1	(1522)
HCT	%	39.5 ±	4.6	27.0	56.0	(1984)
MCH	MG/DL	43.6 ±	3.0	34.8	66.8	(1454)
MCHC	uug	34.7 ±	2.0	18.4	57.9	(1501)
MCV	fL	125.8 ±	8.1	91.1	190.0	(1466)
SEGS	*10 ³ /UL	3.146 ±	1.695	0.000	11.80	(1224)
BANDS	*10 ³ /UL	0.843 ±	0.799	0.000	6.530	(605)
LYMPHOCYTES	*10 ³ /UL	4.913 ±	2.532	0.022	17.40	(1236)
MONOCYTES	*10 ³ /UL	1.513 ±	1.651	0.000	9.480	(1175)
EOSINOPHILS	*10 ³ /UL	0.225 ±	0.273	0.000	2.898	(885)
BASOPHILS	*10 ³ /UL	0.049 ±	0.081	0.000	0.525	(464)
NRBC	/100 WBC	0 ±	1	0	3	(92)
PLATE. CNT.	*10 ³ /UL	417 ±	245	74	1380	(215)
RETICS	%	0.0 ±	0.0	0.0	0.0	(7)
GLUCOSE	MG/DL	84 ±	15	38	174	(1437)
BUN	MG/DL	10 ±	3	0	22	(1458)
CREAT.	MG/DL	1.5 ±	0.5	0.0	11.0	(1405)
URIC ACID	MG/DL	0.2 ±	0.4	0.0	5.1	(466)
CA	MG/DL	10.9 ±	0.6	8.1	15.3	(1434)
PHOS	MG/DL	4.9 ±	0.8	2.8	8.2	(1291)
NA	MEQ/L	129 ±	4	107	182	(1353)
K	MEQ/L	4.8 ±	0.5	3.3	7.6	(1368)
CL	MEQ/L	88 ±	4	67	129	(1323)
IRON	MCG/DL	79 ±	42	8	174	(54)
MG	MG/DL	1.97 ±	0.75	0.65	4.20	(98)
HCO3	MMOL/L	25.1 ±	3.6	13.0	31.0	(44)
CHOL	MG/DL	68 ±	17	0	234	(1290)
TRIG	MG/DL	64 ±	31	0	179	(1124)
T. PROT. (C)	GM/DL	7.7 ±	0.6	5.8	10.5	(1261)
T. PROT. (R)	GM/DL	8.0 ±	0.4	7.4	8.6	(8)
ALBUMIN (C)	GM/DL	3.6 ±	0.4	2.4	5.2	(1145)
GLOBULIN (C)	GM/DL	4.1 ±	0.5	2.6	6.4	(1135)
AST (SGOT)	IU/L	24 ±	10	6	93	(1398)
ALT (SGPT)	IU/L	7 ±	6	0	40	(547)
T. BILI.	MG/DL	0.2 ±	0.1	0.0	1.0	(1187)
D. BILI	MG/DL	0.1 ±	0.1	0.0	0.3	(154)
I. BILI.	MG/DL	0.1 ±	0.1	0.0	0.9	(152)
AMYLASE	U/L	3075 ±	1552	0	7918	(241)
ALK. PHOS.	IU/L	128 ±	61	32	441	(1404)
LDH	IU/L	988 ±	568	157	4306	(1099)

Clinical Pathology Records Report - ISIS/In-House Reference Values
DALLAS ZOO

Scientific name: *LOXODONTA AFRICANA*
Common Name: African elephant

		ISIS Values				
		Mean	S.D.	Min.	Max.	(N)
CPK	IU/L	256 ±	196	18	1884	(247)
OSMOLARITY	MOSMOL/L	259 ±	4	246	272	(689)
ALPHA GLOB.	MG/DL	0.7 ±	0.0	0.7	0.7	(1)
ALPHA-1 GLOB	MG/DL	0.7 ±	0.2	0.2	0.8	(8)
ALPHA-2 GLOB	MG/DL	1.0 ±	0.3	0.8	1.6	(8)
BETA GLOB.	MG/DL	1.2 ±	0.8	0.6	1.7	(2)
Body Temperature:		39.0 ±	0.0	39.0	39.0	(1)
CO2	MMOL/L	27.0 ±	3.1	12.0	61.4	(840)
ESR	MM/HR	27 ±	0	27	27	(1)
FIBRINOGEN	MG/DL	238 ±	139	0	600	(70)
GGT	IU/L	12 ±	5	0	37	(389)
LIPASE	U/L	7 ±	7	0	45	(66)
PROGESTERONE	NG/DL	144.8 ±	216.4	0.060	1005	(266)
TESTOSTERONE	NG/ML	1.010 ±	1.117	0.220	1.800	(2)
TOTAL T4	MCG/DL	8.2 ±	1.3	6.9	9.5	(3)
T3 (RIA)	NG/ML	209.0 ±	0.0	209.0	209.0	(1)
ALBUMIN (E)	GM/DL	4.4 ±	0.3	4.1	4.9	(7)
GAMMA GLOB	GM/DL	1.6 ±	0.4	0.7	1.9	(7)