

Animal Profiles

Name: Keke

Species: *Loxodonta africana*

Sex: Female

DOB: 01-01-1969 (estimated, wild caught)

ISIS #: 03E864

N. Am. Regional Studbook #: 70

Arrived at Dallas Zoo: 26 September 2003. Donation from the Lincoln Park Zoo.

Weight: 8500 lb (9/26/03), 8,375 (9/14/06)

Reproductive History

She has never had a pregnancy and has had few reproductive opportunities. Although she was occasionally housed with a bull at the Caldwell zoo, both she and the bull were believed to be reproductively non-viable. Keke is believed to be a flat-liner, evaluated at Lincoln Park Zoo.

Institutional Transfers

August 11, 1971 -- Keke was purchased by the Lincoln Park Zoo, from Ferndale International Animal Exchange, Inc. on.

October of 1979 -- She was loaned to the Greater Baton Rouge Zoo.

February 1, 1995 -- She was donated the Greater Baton Rouge Zoo.

September 25, 1997 -- She was returned and donated to the Lincoln Park Zoo.

1998 -- The Lincoln Park Zoo converted Keke's management to protected contact.

November 14, 2000 -- Keke was loaned to the Caldwell Zoo (Tyler, TX), while Lincoln Park renovated their elephant facility. She was transferred along with her barn mate, Binti.

September 26, 2003 -- She was transferred to the Dallas Zoo, to make room at the Caldwell zoo for a new acquisition. She was separated from Binti, her stall mate, for the first time, since she was at the Baton Rouge Zoo. Following her successful introduction to Dallas Zoo's elephant, Jenny, she was donated to the Dallas Zoo by the Lincoln Park Zoo in 2004.

Temperament

Aggression

Historical records and present observations document that Keke has never shown significant aggression toward other elephants, or handlers -- either in free or protected contact, even during stressful situations.

Social

Keke is generally described as even tempered, and keeper-oriented. She is also very intelligent, with regard to social dynamics within a group of elephants. For the last 9-10 years she has not displayed the ability or willingness to assume the matriarchal status within the various groups she occupied, although she has not has in a static herd situation for more than a few years at a time. However, during the 16 years she spent at Baton Rouge Zoo she did assume the dominant role, following the de-accessioning of the matriarch predecessor. In the last 9-10 year, when she was housed in groups larger than two, she was mid-ranking in dominance.

She has been housed, at different times, with individuals who had shown a history of hyper-assertiveness and aggressiveness. She adapted well in these situations. Although she was subordinate in all cases, she has been able to establish some level of respect, and has been able to minimize the amount of bullying from her counterparts. This may be attributable, in part to the much greater size of her tusks. Likewise she was quickly able to learn to deal with Jenny, who is a much larger elephant.

While at Lincoln Park, in the 1970's, she was trained and handled by John Lehnhardt who years later claimed "she was the best elephant I ever worked."

Margaret Whittaker, of Active Environments, Inc., has described her as the perfect elephant for housing with "problem females." This was the primary consideration in her transfer to the Dallas Zoo.

Behavior Profile

Transfers & Introductions

Keke has been shipped and introduced to new elephants multiple times. Previous records indicate all occurred without complication or incident. This was also the case in her transfer to the Dallas Zoo. She was 'howdied' with the resident female, Jenny – who is younger but much larger and with a history of elephant-to-elephant aggression – for only three days. Following their physical introduction, Keke settled right into a sometimes strained, but generally mutually respectful relationship with Jenny. In fact, it is apparent that with Keke's influence, Jenny's general intense and excitable behavior has settled down considerably.

Keke's last two transfers were done in protected contact. Her transfer to the Dallas Zoo involved her voluntary entrance into a specially designed elephant shipping crate. The Caldwell Zoo staff was able to train her to enter the crate in only a few days. The crate was craned onto a flatbed truck for departure, and fork lifted from the truck to the Dallas enclosure, upon arrival. Keke was under minor sedation, but seemed to be little affected by the move.

Interactions

She is very food and attention-motivated although she will not normally overtly compete with Jenny for either. She has a very subtle and sneaky way about her, with regard to gaining the resources she desires. When in a competitive situation with Jenny, she often very covertly 'pesters' Jenny, so she can co-utilize whatever space and resource Jenny is enjoying. Often, Jenny will relent over time, without aggression. 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.

She is very cooperative for all husbandry and training processes. Regarding interactions with keepers, she can also be sneaky. She normally respects the trunk control parameters, used in protected contact. However, trainers have to watch out for the occasional trunk reaching into the training reinforcement pouch. Once caught, she is not persistent. She immediately complies with 'trunk down' commands.

Training

Husbandry behavior list (blood draw, VAX, trunk flush, footwork)

Learns quickly

Anticipates

Attentive and responsive

Nervous with new situations, but generally compliant

Likes to do fun behaviors

Sometimes tries to test new trainers, but is generally used for training new trainers – doesn't get frustrated easily.

Not afraid of ERD, neither at Dallas nor Caldwell.

Not afraid of shipping crate, Caldwell.

Medical History

Colic

Keke has shown a history of colic, but not significantly until her transfer to the Caldwell Zoo in 2000 (at the age of 31). There she had numerous bouts of colic such that she was treated prophylactically with up to four gallons of mineral oil orally, twice per month.

When she was transferred to the Dallas Zoo, prophylactic treatment with mineral oil was discontinued. She did not colic for several months, following this change, but it has occurred approximately twice per year, since 2003. She frequently eats rocks and substrate. In fact, she will dig for pebbles, and she will go as far as to pick apart loose concrete to get rocks. This is speculated to be the primary reason for her colic occurrences. However, it is not clear as to whether she utilizes rocks and substrate prior to, or in response to colic. Frequently, during upset, her fecal bolus contains large amounts of rock and/or sand. At the time of resolution of each occurrence, the rock/substrate eating seems to discontinue, as well.

Feet

Keke has no history of foot problems to date, either superficial or internal.

Teeth and Tusks

Her tusks are quite substantial. There is no record, nor information of any medical issues regarding either tusks or teeth. She replaced a set of molars in the winter of 2004, at age 35. She has, over the last year, begun to wear "cable grooves" into the top surface of both tusks, just distal to the sulcus. These are becoming a concern, but are not currently a medical issue.

Temporal Drainage

She often exhibits an odd drainage of clear fluid from both auditory canals. It has an odor, similar to temporal drainage. This occurs when she has been in a state of excitement, and is concurrent with her temporal drainage. However, it is often also observed in non-incident situations. According to Dr. Bets Rasmussen, a behavioral endocrinologist specializing in elephants, this is a rare, but not unheard of occurrence in African elephants.

Skin

Keke has dermal scarring on her left-rear flank from a needle abscess, which resulted from vaccination sometime in the spring of 2003, just prior to her transfer to Dallas.

11/1/2006

Medical History Report - Summary for Individual Specimen
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female
Age: 38Y 2M Est. Birth: 1.Jan.1969
Acc. #: 03E864

.....2005....

- 12.Jan PROBLEM: BLOOD COLLECTI
Clinical note recorded.
- 20.Jan PROBLEM: BLOOD COLLECTI
Clinical note recorded.
- 26.Jan PROBLEM: BLOOD COLLECTI
Clinical note recorded.

*Brodler
3/2/05*

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

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

- 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)

4.Aug PROBLEM: annual examination
vaccination - VEWT
Clinical note recorded. (TNS)

26.Sep Clinical note recorded. (TPA)

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

.....2006....

3.Jan PROBLEM: BLOOD COLLECTION
Clinical note recorded. (DJC)

18.Jan PROBLEM: BLOOD COLLECTION
Clinical note recorded. (DJC)

23.Apr PROBLEM: colic (onset)
Clinical note recorded. (JAR)

24.Apr Clinical note recorded. (JAR)

25.Apr PROBLEM: BLOOD COLLECTION
Clinical note recorded. (JAR)

26.Apr Clinical note recorded. (JAR)

Medical History Report - Summary for Individual Specimen
DALLAS ZOO

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LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 03E864
African elephant                       Age: 38Y 2M Est.     Birth: 1.Jan.1969
Name: KeKe
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.....2006...

- 30.Apr PROBLEM: colic (resolved)
Clinical note recorded. (JAR)

- 1.May Clinical note recorded. (JAR)
- 7.May PROBLEM: BLOOD COLLECTION UNSUCCESSFUL
colic (onset)
Clinical note recorded. (TPA)
- 8.May Clinical note recorded. (JAR)
- 9.May Parasitology examination: (DIAGNOSTIC EXAMINATION) Fecal sample.
CILIIATED/NO PARASITES SEEN
Clinical note recorded. (JAR)
- 10.May PROBLEM: colic (resolved)
Clinical note recorded. (JAR)
- 14.May PROBLEM: lameness - right rear limb (onset)
Clinical note recorded. (JAR)

- 1.Jun PROBLEM: lameness - right rear limb (resolved)

- 12.Jul Clinical note recorded. (JAR)
- 16.Jul Clinical note recorded. (JAR)
- 17.Jul Clinical note recorded. (JAR)
- 25.Jul Clinical note recorded. (JAR)
- 29.Jul Clinical note recorded. (JAR)

- 11.Aug Clinical note recorded. (JAR)
- 27.Aug PROBLEM: Loss of Trunk Strength Stamina (onset)
Clinical note recorded. (JAR)
- 28.Aug Clinical note recorded. (JAR)
- 29.Aug Clinical note recorded. (JAR)

- 3.Sep PROBLEM: edema (onset)
- 4.Sep PROBLEM: Loss of Trunk Strength Stamina (resolved)
Clinical note recorded. (JAR)
- 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:13.60 *10³/UL; HCT: 36.0%; BUN:6 MG/DL;
- 15.Sep PROBLEM: edema (resolved)
TRUNK WASH
Clinical note recorded. (TNS)
- 17.Sep PROBLEM: TRUNK WASH
Clinical note recorded. (TNS)
- 19.Sep PROBLEM: TRUNK WASH

Medical History Report - Summary for Individual Specimen
DALLAS ZOO

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LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 03E864
African elephant                       Age: 38Y 2M Est.     Birth: 1.Jan.1969
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.....2006...

- 19.Sep Clinical note recorded. (TNS)
- 28.Sep PROBLEM: vaccination - VEWT
Clinical note recorded. (TNS)
- 25.Oct Clinical note recorded. (JAR)
- 30.Oct Parasitology examination: (SEMI ANNUAL EXAMINATION) Fecal sample.
CILATED/NO PARASITES SEEN
- 2.Nov PROBLEM: BLOOD COLLECTION
Clinical note recorded. (DJC)
- 18.Nov PROBLEM: Broken Tusk
- 19.Nov Clinical note recorded. (JAR)
- 20.Nov Clinical note recorded. (JAR)
- 21.Nov Clinical note recorded. (JAR)
- 22.Nov PROBLEM: TUSK TRIMMING
Clinical note recorded. (TNS)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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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
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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<i>LOXODONTA AFRICANA</i> (no subsp)	Sex: Female	Acc. #: 03E864
African elephant	Age: 38Y 2M Est.	Birth: 1.Jan.1969
Name: KeKe		

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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

Clinical Note:

15.Jul.2005

Problem: TRUNK WASH

Procedure:

Positive reinforcement training session

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

Clinical Note:

17.Jul.2005

Problem: TRUNK WASH

Procedure:

Positive reinforcement for procedure.

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

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LOXODONTA AFRICANA (no subsp)
African elephant
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Sex: Female Acc. #: 03E864
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Clinical Note: 19.Jul.2005

Problem: 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: annual examination ; vaccination - VEWT
Procedure:
Positive reinforcement session
Annual physical exam
Vaccination: VEWT

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.

Rx:
VEWT vaccine: 2.0 ml IM (TNS)

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)

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<i>LOXODONTA AFRICANA</i> (no subsp)	Sex: Female	Acc. #: 03E864
African elephant	Age: 38Y 2M Est.	Birth: 1.Jan.1969
Name: KeKe		

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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)

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 Note: 23.Apr.2006
Problem: colic (Confirmed)
Observation:
Keke appears to be having another colicky episode. Still BAR but slow and "off". Eating produce well and showing some interest in hay. There was a severe storm in the area two days prior and the elephants were offered a large amount of browse (approximately 4-5 trees worth). This elephant has a history of gastric distress secondary to dietary indiscretion. Told keepers to keep her hydrated-kept her off grain this morning. She is drinking from hose but not as much as her usual. There is normal stool in the yard but don't know from which elephant. She is extending hind limbs intermittantly in a posture suggestive of g-i discomfort but there is no straining or indications of excessive abdominal musculature contractions.
In PM-she is a bit brighter in keepers opinion-eating some hay, had them offer alfalfa (she ate), watermelon (she loved)-tried offering some mineral oil in grain (she threw it), tried hiding 1 Tbs of mineral oil in an apple (she threw it)-have night keepers observe throughout night if they see defecation. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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Clinical Note:

24.Apr.2006

Problem: colic (Confirmed)

Observation:

Brighter this AM, still "off" but intrest in food up. Keepers saw her pass completely normal stool with no excessive effort. Drinking well. Continue to offer Oralyte if she likes it and encourages her to drink. Keepers are to try offering mineral oil but not to push it since she is improving. (JAR)

Clinical Note:

25.Apr.2006

Problem: colic (Confirmed); BLOOD COLLECTION

Observation:

Attitude much worsened this AM. Draping trunk over cables and enclosure walls. Not interested in produce-eating some but only approximately 30%-drinking some but not interested in Oralyte even though offered. There are piles of normal feces present in yard but keepers have not actually witnessed her defecate today.

Attempted blood collection but would not present this afternoon.

Darted with 8 mLs Butorphanol IM in left hip. Keepers are to keep her locked in tonight for night keeper observation and to better be able to assess stool production and quality.

Rx:

Butorphanol: 8 mLs IM by dart-incomplete discharge-7 mLs administered.
(JAR)

Clinical Note:

26.Apr.2006

Problem: colic (Confirmed)

Observation:

Back to acting more normal. Very bright, responsive, doing proper behaviors and drinking a good deal of Oralyte with gusto. Eating produce and hay well. Had hold off grain one more day. Producing normal stool but amount is decreased. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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Clinical Note:

30.Apr.2006

Problem: colic (Confirmed)

Observation:

Eating better-taking mineral oil in bran mixture. On 1/4 grain at this time, told keepers that if her attitude continues to improve to increase grain incrementally to 1/2 then 3/4 then to full ration by end of week. (JAR)

Clinical Note:

1.May.2006

Observation:

Continuing to improve. Passing normal stool-no gravel in feces. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
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Clinical Note:

7.May.2006

Problem: BLOOD COLLECTION UNSUCCESSFUL ; colic (Confirmed)
Procedure:
Blood collection attempted, but elephant would not respond to
commands.

Observation:

Depressed this morning. Refusing all food-not interested in treats.
Keepers have not noted her drinking and when offered Oralyte only took
in a small amount.

When seen at 3PM, "Keke" was in her inside stall with head supported on
bars and trunk hanging over the side of one of the openings. She did
not respond to my presence. She did turn and face me after being
darted, but would not take the dart out. She was a little more active
with the second dart, but still would not remove either dart.
Requested that attempts be made to remove darts before everyone goes
home.

RX:
Butorphanol: 90 mg IM by dart. Partial injection (1/3 ?).
Butorphanol: 80 mg IM by dart. Partial injection (1/2-2/3 ?).

Comment:
Requested that attempts be made to remove darts before everyone goes
home. Requested that night keepers check on "Keke hourly and record
observations.

Restrict grain and alfalfa at this time. Can offer coastal hay and
produce. Offer electrolytes and regular water. (TPA)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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Clinical Note:

8.May.2006

Problem: colic (Confirmed)

Observation:

A bit brighter today than day previous. A single scant pile of normal appearing feces in stall overnight. Over the course of the day passed two more piles. Still no interest in food (produce, grain, alfalfa, hay), drank a bit more Oralyte but not a significant amount. Responding slowly to keeper commands. Had keepers transfer into barn for darting (they do not believe she will present for hand injection since she is not targeting at this time). Darts went off and she reacted more to darting than previous day. Once darts out recommend let her out and lock in barn overnight to monitor fecal production. Trying to keep her from having only negative experiences in barn. Night keepers are to do hourly checks again, noting fecal production and attitude. Keepers are setting up water containers with Oralyte and regular water.

Rx:

Butorphanol: 100 mg IM by dart-complete injection
Banamine: 1000 mg IM by dart-one dart incomplete-total dose received
1950 mg IM (JAR)

Clinical Note:

9.May.2006

Problem: colic (Confirmed)

Observation:

Eating better-eating most of produce offered but not consistently. Takes food but throws it. Ate some alfalfa well but only a small amount. Not interested in browse. Passed some more feces-personally witnessed one bolus being passed. No straining at all, feces dark and dry. Keke did drink multiple gallons of Oralyte overnight. Resonding better to keeper commands but becoming more and more reluctant to come into barn. Tried offering some oral Banamine in her bran/mineral oil mix, ate mix but was suspicious of areas with Banamine present. Darted without incident-complete discharge of all darts. First Banamine dart seperated at needle-needle is still in left caudal thigh (keepers are to try and pull it when she settles down.)

Rx:

Butorphanol: 1000 mg IM
Banamine: 750 mgs IM(decreased dose b/c keepers think they got 500 mgs PO) (JAR)

LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

Parasitology Examination:

Submission Data >>

Type: Fecal sample
Purpose: DIAGNOSTIC EXAMINATION

Sample id.: 2006-0249
Date collected: 9.May.2006
Time collected: 3:00
Collected by: AA

Collected from:

From an individual specimen.

Enclosure: ZNMLM7B

Examination Data >>

Storage: refrigerated
Consistency: formed
Gross appearance: Atypical

Date examined: 9.May.2006
at: 15:00
by: CJP

Tests & Results >>

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

FEW

Clinical Note:

10.May.2006

Problem: colic (Confirmed)

Observation:

Doing great today. Eating everything and begging for more. Drank a good deal of electrolyte fluid and solicited for a bath. Still off grain until tomorrow. Produced 10 piles of closer to normal feces (no rocks seen in any of the piles). Consumed some of the oral Banamine (~800 mg total) and is very active.

Rx:

Banamine: 800 mg BID PO (if possible) for 2 days

Recommend keeping her on mineral oil/bran mixture as begin introducing grain back into diet. After 2 weeks or so, start weaning mineral oil out of diet to determine if that has a significant effect on preventing colic or not. (JAR)

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African elephant
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Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969
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Clinical Note: 14.May.2006

Problem: lameness - right rear limb (Suspected)

Observation:

Moving around well and eating great. Showing reluctance to extend hip/stifle fully on right rear. Observed moving around exhibit and is walking with no problems; however when asked to climb over log in exhibit is very protective of that right side. Suspect residual muscle pain and discomfort from darts of the previous week. Had been maintained on oral Banamine for two days post darting which may have masked clinical signs until this weekend. Try oral Banamine again-if signs resolve keep on meds for 6 days total.

Rx:
Banamine: Give 750 mg PO SID for 6 days (dose decrease for ease of measuring) (JAR)

Clinical Note: 12.Jul.2006

Observation:

Starting to show signs of worsening colic. Had been seen eating rocks two weeks previously so prophylactically had been on bran and mineral oil. On 11 July went from 1/2 ration of grain to 3/4 and now is painful. Refusing all food. Opting to dart with Banamine.

Rx:
Banamine: 10 mLs IM by dart-complete discharge (JAR)

Clinical Note: 16.Jul.2006

Observation:

Improved appetite. Off grain completely UFN. (JAR)

Clinical Note: 17.Jul.2006

Observation:

Today passed a copious amount of rocks in her feces. Keepers have found source of rocks-they are fill used when the moat outside cables was filled. Curator is discussing with construction to have concreted over. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe
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Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969
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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.: G06-3284
Tissues obtained: 07/18/06
Received: 07/21, reported 07/25/06

Patient ID: African Elephant #03E864
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 labeled "left front foot" has four tissues to 4 cm. in greatest dimension that are processed in block #1. Container #2 is labeled "right front foot" and has six tissues to 4 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 are gas producers. It is important to rule out concurrent fungal infection, as this can be a difficult management problem. Fungal

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LOXODONTA AFRICANA (no subsp)

Sex: Female

Acc. #: 03E864

African elephant

Age: 38Y 2M Est.

Birth: 1.Jan.1969

Name: KeKe

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Clinical Note:

25.Jul.2006

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, 07/27/06: GMS stain on all tissues from both blocks reveals
a
mixed bacterial population and large numbers of silver positive,
filamentous
bacteria deep within the areas of epidermal degeneration. No fungal
elements are seen.

Michael M. Garner, DVM, Dipl. ACVP

MMG/hc

E-mail: Zoopath@aol.com

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

Clinical Note:

11.Aug.2006

Observation:

Approved increase in her diet to 3/4 of her normal ration of
grain-continue with mineral oil mix and watch for colic. (JAR)

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African elephant	Age: 38Y 2M Est.	Birth: 1.Jan.1969
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Clinical Note: 27.Aug.2006

Problem: Loss of Trunk Strength Stamina (Suspected)

Observation:

Keepers noted this morning that the distal 12-18 inches of her trunk is very limp. Good trunk tip mobility and strength but has loss of strength in extensors. Flexor muscle strength and stamina appear fine. Suspect traumatic injury. Not swollen or warm to touch, good air movement through both nostrils and good food prehension. Keepers fed her an ice treat earlier in the day and for a few hours after that her trunk usage was greatly improved. Recommended to keepers to monitor trunk usage carefully-if has difficulty eating/drinking or has changes in stool consistency or attitude give a call. (JAR)

Clinical Note: 28.Aug.2006

Problem: Loss of Trunk Strength Stamina (Suspected)

Observation:

Trunk usage is improved though still has moments of "limp trunk", over course of day if day is measured out-has more "good normal trunk" moments for longer periods of time than previous day and "limp trunk" moments are greatly decreased in frequency and length. Continued improvement of flexors.

Rx:

Butorphanol: 80 mg PO diluted in 2 mLs 50% dextrose(in concentrated juice)--took all
Ketoprofen: 1 mL PO diluted in 1 mL 50% dextrose(in concentrated juice)--took all (JAR)

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LOXODONTA AFRICANA (no subsp)	Sex: Female	Acc. #: 03E864
African elephant	Age: 38Y 2M Est.	Birth: 1.Jan.1969
Name: KeKe		

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Clinical Note: 29.Aug.2006

Problem: Loss of Trunk Strength Stamina (Suspected)

Observation:

Some improvement of trunk usage and decreased amount of time of "limp trunk". Try oral and topical anti-inflammatories today in addition to analgesic.

Rx:

Butorphanol: 30 mg PO BID (mixed in juice)--took completely both injectable form in liquid and crushed pills in peanut butter

Banamine: 750 mg mixed in 15 mLs 50% dextrose--refused all forms (discontinue)

Surpass topical cream: Apply and massage small amount in to affected area of trunk once a day. (JAR)

Clinical Note: 4.Sep.2006

Problem: Loss of Trunk Strength Stamina (Suspected); edema (Suspected)

Observation:

Appears to be an area of ventral edema along caudal midline. It is more prevalent along left side of midline and is approximately the size of a honeydew melon. She will not allow me to palpate but keepers report that it is "fluidy" in consistency. Discussed hydrotherapy, and monitoring size. Keepers took photos and measured so they can monitor and note on daily. (JAR)

Clinical Note: 6.Sep.2006

Problem: edema (Suspected); BLOOD COLLECTION

Procedure:

Positive reinforcement for blood collection

CBC/Chem sent in (DJC)

Clinical Note: 6.Sep.2006

Problem: edema (Suspected); BLOOD COLLECTION

Observation: ANTECH

CBC: The differential count is very odd but with the unusual structure of elephant neutrophils could be WNL.

Chem: No significant abnormalities (JAR)

Clinical Pathology Records - Specimen Report
DALLAS ZOO

LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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	>	13.6		*10 ³ /UL
RED BLOOD CELL COUNT		2.9		*10 ⁶ /UL
HEMOGLOBIN	<	12.0		GM/DL
HEMATOCRIT		36		%
MCV		124		fL
MCH		41.4		uug
MCHC		33.3		gm/dL
SEGMENTED NEUTROPHILS	>>	60	(8.160)	% (*10 ³ /UL)
LYMPHOCYTES		31	(4.216)	% (*10 ³ /UL)
MONOCYTES		3	(0.408)	% (*10 ³ /UL)
EOSINOPHILS	>>	6	(0.816)	% (*10 ³ /UL)
BASOPHILS		0		% (*10 ³ /UL)
ESTIMATED PLATELET COUNT		ADEQ		
PLATELET COUNT	>>	1143		*10 ³ /UL
FIBRINOGEN		300		MG/DL

Morphology Results >>

ANISOCYTOSIS +2

Clinical Pathology Records - Specimen Report
DALLAS ZOO

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LOXODONTA AFRICANA (no subsp)           Sex: Female           Acc. #: 03E864
African elephant                         Age: 38Y 2M Est.     Birth: 1.Jan.1969
Name: KeKe
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Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Manual restraint used.

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

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Chemistry >>

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

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

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Tests and Results >>

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GLUCOSE >> 120 MG/DL
BLOOD UREA NITROGEN < 6 MG/DL
CREATININE 1.4 MG/DL
BUN/creatinine ratio 4.29
CALCIUM > 11.6 MG/DL
PHOSPHORUS > 6.0 MG/DL
calcium/phosphorus ratio 1.93
SODIUM > 136 MEQ/L
POTASSIUM 5.1 MEQ/L
sodium/potassium ratio 26.7
CHLORIDE > 96 MEQ/L
MAGNESIUM 2.6 MG/DL
CHOLESTEROL 79 MG/DL
TOTAL PROTEIN (COLORIMETRY) 8.2 GM/DL
ALBUMIN (COLORIMETRY) < 3.1 GM/DL
GLOBULIN (COLORIMETRY) > 5.1 GM/DL
albumin/globulin ratio 0.608
ASPARTATE AMINOTRANSFERASE 27 IU/L
TOTAL BILIRUBIN 0.2 MG/DL
ALKALINE PHOSPHATASE < 60 IU/L
CREATINE PHOSPHOKINASE 64 IU/L
ALBUMIN GLOBULIN RATIO 0.6
BUN/CREATININE RATIO 4
GAMMA GLUTAMYLTRANSFERASE 13 IU/L
SODIUM/POTASSIUM RATIO 27

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<i>LOXODONTA AFRICANA (no subsp)</i>	Sex: Female	Acc. #: 03E864
African elephant	Age: 38Y 2M Est.	Birth: 1.Jan.1969
Name: KeKe		

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Clinical Note: 15.Sep.2006
Problem: edema (Suspected); 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: 28.Sep.2006
Problem: vaccination - VEWT
Procedure:
Positive reinforcement session
Vaccination (by keeper)

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

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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Clinical Note:

25.Oct.2006

Procedure:
Aural examination

Observation:

Keepers report discharge from Keke's right ear. None had been seen this morning but as was examining ear, a large amount of mucous extruded from ear canal. Collected for examination.

Cytology:

Bacterial Otitis

The preparations contain very large numbers of pleomorphic bacterial rods, small numbers of neutrophils and abundant debris consistent with bacterial otitis. (JAR)

Submission Data >>

Type: Fecal sample
Purpose: SEMI ANNUAL EXAMINATION

Sample id.: 2006-0857
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

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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Clinical Note: 2.Nov.2006

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

Clinical Note: 19.Nov.2006

Observation:
This elephant broke approximately 36" of her right tusk overnight, the remaining segment has an oblique fracture along lateral wall of tusk. The tip is very sharp and she has cut her right foreleg with it. Was able to file and round off tip of tusk. Instructed keepers to continue filing rough edges until final determination to remove broken piece or not. (JAR)

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.Nov.2006

Observation:
Discussion with curator and area supervisor agreed to trim off tusk back behind most proximal portion of fracture to prevent further damage to this tusk. Begin desensitization with gigli wire today. (JAR)

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: KeKe

Sex: Female Acc. #: 03E864
Age: 38Y 2M Est. Birth: 1.Jan.1969

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Clinical Note:

22.Nov.2006

Problem: TUSK TRIMMING

Procedure:

Positive reinforcement session

Tusk trimming

Observation:

This elephant broke her right tusk during night on 11/18, in an oblique fracture, leaving a 12" segment of tusk. Today used gigli wire to make transverse cut, leaving approximately 4" tusk. There remains a ~ 3" length of tusk with a lateral oblique fractured surface. There is a black dot in the center of the cut surface, likely representing dentin. (TNS)

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

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Scientific name: LOXODONTA AFRICANA
Common Name: African elephant
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		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)