

MIAMI METROZOO MEDICAL RECORD

DATE OF
ACQUISITION
OR BIRTH 1980ANIMAL ELEPHANT, AFRICANACCES.NO. 928 stbk#197 SEX 1.0 HOUSE NAME MACHITO

- 05/14/98 Per USDA mandate, each elephant has been conditioned to allow saline to be instilled into their trunk and then to blow it back out into a plastic bag ("trunk washing" technique) for mycobacterial cultures. PROC/collected 40-50ml (60ml saline total placed down into trunk) of "trunk wash" sample (after overnight water withholding) for mycobacterial culture on each of three consecutive mornings (5/12, 5/13, & today) - frozen samples from 5/12 & 13, and refrig'd sample from 5/14 sent overnight to NVSL as per protocol, to complete ANNUAL TB TESTING requirement. Elephants well-behaved and performed sampling without problems.
- 06/05/98 BLOOD/CBC, chem screen, save serum - as opportunistic screen to check health status.
- 01/28/99 BLOOD/whole blood drawn in EDTA (~40ml) for DNA study & banking by D.Schmitt (Missouri St. Univ.).
- 05/06/99 PROC/collected 40-50ml (60ml saline total placed down into trunk) of "trunk wash" sample (after overnight water withholding) for mycobacterial culture on each of three consecutive mornings (5/4, 5/5, & today) - frozen samples from 5/4 & 5, and refrig'd sample from 5/6 sent overnight to NVSL as per USDA-mandated-protocol, to complete ANNUAL TB TESTING requirement. Additionally, BLOOD/CBC, chem screen, serum protein electrophoresis, save serum - collected yesterday for screening purposes. Macho well-behaved and performed sampling without problems.
- 06/07/00 PROC/collected 40-50ml (60ml saline total placed down into trunk) of "trunk wash" sample (after overnight water withholding) for mycobacterial culture on each of three consecutive mornings (6/5, 6/6, & today) - frozen samples from 6/5 & 6, and partially frozen sample from 6/7 sent overnight to NVSL as per USDA-mandated-protocol, to complete ANNUAL TB TESTING requirement.
- 06/20/00 BLOOD/collected a sample but too late for lab courier... in-house PCV & T.S.; save serum.
- 06/21/00 BLOOD/CBC, chem screen, save serum - recollected today (and still missed courier - lab error this time) - but sent in on 6/22.
- 05/29/01 Keepers reported that Machito was in an altercation with one of the cows at the end of last week - he has some swelling over his left lumbar muscles where she had repeatedly hit him with her tusks ... although there is no open wound and it does not seem to be bothering Macho much; additionally, since the fight he has developed a focal corneal ulcer (?) on the right side (just below center) with some general haziness to the cornea; no significant blepharospasm, and only mild tearing. RX/keepers to apply triple a'biotic ophth. ointment as possible BID for next few days and report if the lesion does not clear up within a week or if it gets worse.
- 06/20/01 PROC/collected 40-50ml (60ml saline total placed down into trunk) of "trunk wash" sample (after overnight water withholding) for mycobacterial culture on each of three consecutive mornings (6/18, 6/19, & today) - frozen samples from 6/18 & 19, and partially frozen sample from 6/20 sent overnight to NVSL as per USDA-mandated-protocol. (very well-behaved with conditioned trunk-

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 ANIMAL ELEPHANT, AFRICAN
 ACCES. NO. 928 stbk#197 SEX 1.0 HOUSE NAME MACHITO

- wash procedures). BLOOD/CBC, chem screen, save serum (collected with trunk-wash routine, for annual check). COMT/no signs of ill-health, no problems reported.
- 01/07/02 Reportedly came in very lame off paddock last night - keeper found and removed a nail which had been driven approx 1 inch into sole of RF foot (puncture closed up immediately behind it). VAX/tetanus toxoid 2.0ml IM (Rt thigh). COMT/cannot see where wound was on foot, no lameness noted today - keepers informed to watch carefully for any signs of soreness/lameness at all and notify vet so that infection may be drained if it starts up under the sole...
- 06/12/02 PROC/collected 40-50ml (60ml saline total placed down into trunk) of "trunk wash" sample (after overnight water withholding) for mycobacterial culture on each of three consecutive mornings (6/10, 6/11, & today) - frozen samples sent overnight to NVSL as per USDA-mandated-protocol (very well-behaved with conditioned trunk-wash procedures).
- 06/25/02 BLOOD/CBC, chem screen; save serum. COMT/annual check of elephants - all reported to be doing well, no problems recognized.
- 03/12/03 BLOOD/sent banked sample of serum in for West Nile virus serology (survey of elephant collection) - results all negative. - CLM
- 03/21/03 Keepers asked vet to assess gait on Macho - gradually developing a deviation in the hindlegs when he walks. OBS/laxity in both hocks when walking - distal limb (foot) snapping out laterally from the hock joints as he bears weight over limbs in stride; no obvious discomfort demonstrated. COMT/may be a degenerative phenomenon of the ligaments and joints, not sure what can be done about it; will try to consult with other vets. Watch only for now. - CLM
- 04/08/03 BLOOD/CBC, chem screen, protein electrophoresis; serum from blue-top tube saved for mineral panel. COMT/just double-checking to see if any blood abnormalities may be revealing in light of the leg problems; conversation with R.Houck (former Ringling vet) was not particularly helpful regarding hock abN's - said he had not seen that in any of his circus herds but that it might be reflecting distally from a stifle problem and should reassess visually to check this - had seen what he believed were torn cruciates, and of course, varying degrees of chronic osteoarthritis in carpal joints, but no specific hock/tarsal problems; recommended that we do not ask for hindleg stands (as part of training, although he will need to do this for breeding, but that's "voluntary"), may wish to look into Cosequin or some other nutraceutical for joint protection, long-term. - CLM
- 05/14/03 ANNUAL TB TESTING: PROC/collected 40-50ml (60ml saline total placed down into trunk) of "trunk wash" sample (after overnight water withholding) for mycobacterial culture on each of three consecutive mornings (5/12, 5/13, & today) - frozen samples from 5/12 & 13, and partially frozen sample from 5/14 sent overnight to NVSL as per USDA-mandated-protocol (well-behaved for

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collection routine). - CLM

06/04/03 WT=8872 lbs. SMM

09/17/03 WT=9040 lbs.

12/25/03 WT=8890 lbs.

02/27/04 Trying to meet AZA demands that each elephant has baseline foot radiographs on file: borrowed portable xray machine from Dr. Templeton for part of day. XRAY/oblique plantar-dorsal views of each digit (corresponding to toenails) on both hindfeet (6 total) [kvp=48, mas=1.6]; lateral views of each hock [kvp=70, mas=3.2] (opportunistic while had machine - due to his instability of these joints, anticipating future problems; attempted plantar-dorsal views unsuccessful - too dense) some "lipping" on the dorsal aspects of tarsal bones around each joint - early arthritis??? no other lesions noted. COMT/Macho getting nervous and had been in chute for a while for these procedures - stopped with these for now, will plan to do front feet at another date. - CLM

03/12/04 XRAY/each digit on each front foot - single views, D-P-obliques. COMT/this completes the set of rad's for AZA for Macho. - CLM

06/08/04 ANNUAL TB TESTING: PROC/collected 40-50ml of "trunk wash" sample (after overnight water withholding on 6/6 and 6/7 and two hour withholding on 6/8; 60ml sterile saline were placed in each trunk) for mycobacterial culture on each of three consecutive mornings (6/6, 6/7 & today 6/8); all samples were immediately frozen, and shipped overnight on ice to NVSL, as per USDA-mandated-protocol. All elephants were well-behaved for collection routine. BLOOD/CBC, chem. screen, save serum; blood taken for annual check. SMM

06/09/04 Dr. Dennis Schmitt at Metrozoo today to perform ultrasonographic assessments of each elephant's reproductive tract. Machito has normal testes, but seems to have a markedly underdeveloped set of secondary sex glands, and has no obvious sperm accumulation in his ampullae (not sure what this means). Written report will be added to his record when received. - CLM

06/17/04 WT=9530 lbs.

07/14/04 All elephants due for tetanus booster. VAX/tetanus toxoid 2.0ml IM (left caudal thigh). - CLM

08/07/04 Dr. Schmitt back at the zoo to evaluate Dahlip, and to recheck Machito. PROC/ultrasound exam per rectum of Macho's secondary sex glands, etc, this time, showed much more normal distention of the ampullae - made an attempt at inducing an erection and collecting a sample of semen by rectal massage, but Machito a bit nervous and wouldn't relaxed enough to produce more than urine at this time. An addendum to his repro. evaluation will be added to his record, as this at least suggests that he may be a semen donor in the future. Keepers will try to condition him to rectal massages on a once weekly basis and see if he will become better at it! URINALYSIS/opportunistic; no abN's. - CLM

01/26/05 WT=8942 lbs.

Clinical Notes - Individual Specimen Report
MIAMI METROZOO

Scientific Name: *LOXODONTA AFRICANA AFRICANA*
Common Name: South African bush elephant
Name: MACHITO

Accession #: 928
Male

Birth: 11.Apr.1980 (Estimated)

7.Aug.2004

<<< Urinalysis >>>

Laboratory: Miami Metrozoo
 other

Date collected: 8/7/04
Date analysed: 8/7/04
Analysis by: CLM

Sample collection:
 floor
 mid-stream
 catheter
 cystocentesis

Sample storage:
 room temperature
 refrigerated
 frozen

Color: pale yellow
Specific Gravity: 1.010
cloudy

Appearance: clear
 hazy / slightly
 cloudy / turbid

Leukocytes:
Nitrite:
Urobilinogen: normal
Protein: neg
pH: 8.0
Blood: neg
Ketones: neg
Bilirubin: neg
Glucose: neg

RBC/hpf: none
WBC/hpf: none
Bacteria/hpf:
Casts/lpf: granular???
Crystals: few

Epithelial cells: few
Mucus:

Comments: opportunistic; lots of granular strands of debris - possible casts or from reproductive massage procedures; no sperm seen
(CLM)

Medical History Report - Summary for Individual Specimen
MIAMI METROZOO

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Common Name: South African bush elephant             Male
Name: MACHITO                                         Birth: 11.Apr.1980 (Estimated)
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.....2000...

- 24.Jan Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 23.Mar Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 22.May Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 21.Jun Blood sample: (EDTA) Hematology/Chemistry/Serology results.
WBC:10.10 *10³/UL; HCT: 44.0%; BUN:10 MG/DL;
- 25.Jul Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 26.Sep Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 11.Dec Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

.....2001...

- 23.Jan Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 20.Mar Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 29.May Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 20.Jun Blood sample: (EDTA) Hematology/Chemistry/Serology results.
WBC:7.30 *10³/UL; HCT: 49.0%; BUN:15 MG/DL;
- 24.Jul Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 25.Sep Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
- 28.Nov Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

.....2002...

- 22.Jan Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.

Medical History Report - Summary for Individual Specimen
MIAMI METROZOO

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Common Name: South African bush elephant             Male
Name: MACHITO                                         Birth: 11.Apr.1980 (Estimated)
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.....2002....

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22.Jan  NO PARASITES SEEN

19.Mar  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

14.May  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

25.Jun  Blood sample: (EDTA) Hematology/Chemistry/Serology results.
        WBC:11.90 *10^3/UL;  HCT: 55.0%;  BUN:14 MG/DL;

23.Jul  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

25.Sep  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

20.Nov  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

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.....2003....

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14.Jan  Blood sample:

29.Jan  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

27.Mar  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

 8.Apr  Blood sample: (EDTA) Hematology/Chemistry/Serology results.
        WBC:8.80 *10^3/UL;  HCT: 44.0%;  BUN:10 MG/DL;

30.May  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

31.Jul  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

17.Sep                                     Weight: 4102 Kg ( 9041 Lb)

 1.Oct  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
        NO PARASITES SEEN

19.Nov  Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.

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.....2003....

19.Nov NO PARASITES SEEN

25.Dec

Weight: 4034 Kg (8891 Lb)

.....2004....

27.Jan Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

23.Mar Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

25.May Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

8.Jun Blood sample: (EDTA) Hematology/Chemistry/Serology results.
WBC:7.50 *10³/UL; HCT: 37.0%; BUN:8 MG/DL;

17.Jun

Weight: 4324 Kg (9530 Lb)

14.Jul Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN
Purpose/Problem: SuperTet w/havlogen
Vaccination: TETANUS TOXOID 2.0ml IM
Clinical note recorded. (CLM)

7.Aug Clinical note recorded. (CLM)

29.Sep Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

17.Nov Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

.....2005....

26.Jan Parasitology examination: (ROUTINE EXAMINATION) Fecal sample.
NO PARASITES SEEN

Weight: 4057 Kg (8942 Lb)

Clinical Pathology Report - Specimen Spreadsheet
MIAMI METROZOO

Scientific Name: **LOXODONTA AFRICANA AFRICANA**
 Common Name: **South African bush elephant**
 Name: **MACHITO**

Accession #: **928**
 Male

Birth: **11.Apr.1980 (Estimated)**

Date	21.Jun.2000	20.Jun.2001	25.Jun.2002
Time	:	:	:
Restraint	Manual	Manual	Manual
Health	Normal	Normal	Normal
Fasting	< 8 hours	< 8 hours	< 8 hours
Activity	Active	Active	Active
Hematology laboratory	U OF M	U OF M	U OF M
Hematology anticoagulant	EDTA	EDTA	EDTA
Hematology quality problems	none	none	none
WBC	*10 ³ /UL 10.1	7.3	11.9
RBC	*10 ⁶ /UL 3.62	3.55	4.08
HGB	GM/DL 14.5	15.2	13.9
HCT	% 44	49	55*
SEGS	% (*10 ³ /UL) 50 (5.050)	42 (3.066)	60 (7.140)
LYMPHOCYTES	% (*10 ³ /UL) 47 (4.747)	51 (3.723)	39 (4.641)
MONOCYTES	% (*10 ³ /UL) 3 (0.303)	6 (0.438)	0
EOSINOPHILS	% (*10 ³ /UL) 0	1 (0.073)	1 (0.119)
BASOPHILS	% (*10 ³ /UL) 0	0	0
Chemistry laboratory	U OF M	U OF M	U OF M
Chemistry sample:	Serum	Serum	Serum
Chemistry quality problems	none	none	none
ALBUMIN (E)			
GLUCOSE	MG/DL 73	94	74
BUN	MG/DL 10	15	14
CREAT.	MG/DL 2.1	2.0	2.6
URIC ACID	MG/DL	0.2	<0.2
CA	MG/DL 11.6	11.4	11.2
PHOS	MG/DL 5.8	5.9	5.6
NA	MEQ/L 130	135	143
K	MEQ/L 5.0	4.9	5.2
CL	MEQ/L 84	88	93
CHOL	MG/DL 55	72	69
TRIG	MG/DL	49	42
T.PROT. (C)	GM/DL 8.1	8.6	9.9
ALBUMIN (C)	GM/DL 3.8	3.8	5.2
GLOBULIN (C)	GM/DL 4.3	4.8	4.7
AST (SGOT)	IU/L 18	17	25
ALT (SGPT)	IU/L 17	16	16
T. BILI.	MG/DL 0.4	0.3	0.1
D. BILI	MG/DL	0.2	0.1
AMYLASE	U/L 462	475	477

Clinical Pathology Report - Specimen Spreadsheet
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ALK. PHOS.	IU/L	152	149	228
LDH	IU/L		1076	1434
CPK	IU/L		388	461
CO2	MMOL/L	21	25	21
GGT			16	27

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Name: MACHITO

Accession #: 928
Male

Birth: 11.Apr.1980 (Estimated)

Date	14.Jan.2003	8.Apr.2003	8.Jun.2004
Time	:	:	:
Restraint	Manual	Manual	Manual
Health	Normal	Normal	Normal
Fasting	< 8 hours	< 8 hours	< 8 hours
Activity	Active	Active	Active
Hematology laboratory		U OF MIAMI	U OF MIAMI
Hematology anticoagulant		EDTA	EDTA
Hematology quality problems		none	none
WBC	*10 ³ /UL	8.8	7.5
RBC	*10 ⁶ /UL	3.20	2.65
HGB	GM/DL	13.6	11.8
HCT	%	44	37
SEGS	% (*10 ³ /UL)	53 (4.664)	53 (3.975)
LYMPHOCYTES	% (*10 ³ /UL)	42 (3.696)	46 (3.450)
MONOCYTES	% (*10 ³ /UL)	4 (0.352)	1 (0.075)
EOSINOPHILS	% (*10 ³ /UL)	1 (0.088)	.
BASOPHILS	% (*10 ³ /UL)	0	.
PLATE. EST.			ADEQ

Chemistry laboratory	CORNELL DX'C L	U OF MIAMI	U OF MIAMI
Chemistry sample:	Serum	Serum	Serum
Chemistry quality problems	none	none	none

ALBUMIN (E)	2.39	
GAMMA GLOB	2.18	
GLUCOSE	77	82
BUN	10	8
CREAT.	1.7	1.8
URIC ACID	<0.2	<0.2
CA	12.4	11.0
PHOS	4.9	5.5
NA	141	132
K	5.1	4.7
CL	88	86
IRON	274	
MG	2.98	
CHOL	68	74
TRIG	70	55
T.PROT. (C)	8.8	8.0
ALBUMIN (C)	4.2	3.8
GLOBULIN (C)	4.6	4.2
AST (SGOT)	26	21

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ALT (SGPT)	19	17
T. BILI.	0.1	0.2
D. BILI	0.1	0.1
AMYLASE	377	280
ALK. PHOS.	175	87
LDH	1369	996
CPK	676	426
CO2	26	32
GGT	20	10
WNV AB	NEG	
ALPHA-1 GLOB	1.19	
ALPHA-2 GLOB	1.03	
BETA GLOB.	2.02	
COPPER	125	
SELENIUM	12	
ZINC	1.06	