

Skills Development for Disease Monitoring in the GLTFCA

10th AHEAD-GLTFCA Working Group Meeting
23-26th April, 2010
Hazyview, South Africa

Dr Emily Lane
National Zoological Gardens

Dr Mary Lou Penrith
National Zoological Gardens
Faculty of Veterinary Science,
Pretoria

Dr Rosa Costa
Mozambique Agrarian Research Institute,
Maputo
Professor Lawrence
Faculty of Veterinary Science, Pretoria



Progress to Date

• Support received:

- Wildlife Conservation Society
- United States Fish and Wildlife Service – Wildlife without Borders: Africa
- Seed Grant

Project goal:

to build skills and resource capacity to facilitate wildlife disease diagnostics in the Great Limpopo Transfrontier Conservation Area (GLTFCA)



Develop a wildlife disease investigation course

• Practical Wildlife Disease Investigation course

- 6th Feb 2008
 - Dr C Foggin, Dr M Hofmeyr
 - Faculty of Veterinary Science, National Department of Agriculture (now DAFF), NRF, NZG, SANParks, SA Wildlife College, Mozambican Agricultural Research Institute (IIAM), Wildlife Veterinary Unit (Harare)
 - Course outline
 - FVS – Univ of Pretoria
 - April 2008 - framework
- 6th May 2008
 - Course details and logistics discussed
- 9th Sept 2008
 - Dept of Paraclinical studies: Dr Leon Venter
- 16th October 2008
 - Course details and logistics discussed



GLTFCA vets attend the course

• Practical Wildlife Disease Investigation course

- 1st course
 - Faculty of Veterinary Science
 - 30th March – 3rd April 2009
 - 3 vets each from Mozambique, Zimbabwe
 - 7 vets from South Africa
 - 5 additional vets from private practice
- 2nd course
 - Faculty of Veterinary Science
 - Date uncertain
 - Funds available for another 2 candidates on the course



Provision of necropsy kits

- Necropsy sampling kits
 - 13 vets attending the course
 - Mozambique Agricultural Research Institute (IIAM)



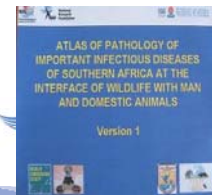
- Grant extension given
 - Necropsy kit for Eduardo Mondlane University

Develop a wildlife pathology training course

- Experiential course
 - 2 week course
 - Dr John Lawrence (Faculty of Veterinary Science)
 - Dr Mary Lou Penrith (National Zoological Gardens of South Africa, Faculty of Veterinary Science)
 - Attend necropsy and biopsy sessions, review selected teaching slides, photographs and reference materials

– Pathology Atlas

- Dr J Lawrence



Mozambican pathologists attend the course

- Experiential wildlife disease pathology course

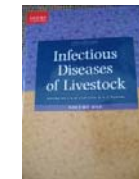
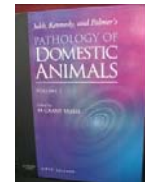
- Dr Simone Magalo (IIAM)
- Dr Afonso Sussuro (IIAM)
- Dr Gaby Monteiro (Eduardo Mondlane)
- Dr Cláudio Laisse (Eduardo Mondlane)



- 1 pathologist in 2010
- Exposure to wildlife anatomy and pathology
- Wildlife pathologist network


Provision of reference materials

- Pathology of Domestic Animals (5th Ed)
- Infectious diseases of Livestock (2nd Ed)
- AFIP Atlases of Protozoan and Metazoan parasites
- Fundamentals of Toxicologic Pathology (2nd Ed)
 - Published 2010


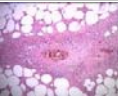



Cover diagnostic processing costs

- Wildlife pathology cases (17 IIAM/ 21 NZG)

African buffalo	II.	too rotten for analysis	
Domestic pig	II.	renal disease	
Domestic cow	II.	ovine tuberculosis	
Domestic cow	II.	cute encephalomyocarditis	
Domestic cow	II.	chronic glomerulonephritis	
Domestic goat	II.	gastrointestinal parasitism	
Domestic cow (x) serum	various	negative for foot and mouth disease	
Domestic cow (x) serum	various	variable positivity for rickettsia	

Objective 5 (cont): South Africa

Sable	16-Jan-09	Acute heart failure (possible Haemonchosis)	
Lion	19-Jan-09	Interstitial pneumonia and elbow cellulitis (Mycobacterium)	
Lion	19-Jan-09	Superficial necrolytic dermatitis	
Lion	28-Jan-09	None possible (autolysis)	
Leopard	05-Feb-09	Well-differentiated adenocarcinoma, liver	
Cheetah	27-Feb-09	Post-anaesthetic heart failure	
Common Duiker	18-Feb-09	Cerebral cestodiasis	
African Buffalo	03-Mar-09	Suspected tuberculosis (Dr de Garine-Wichatitsky et al, 2010)	
Lion	03-Mar-09	Concurrent histiocytic pneumonia, poliomyelitis and parasitic myositis (probable Mycobacterium)	
Black Wildebeest	08-Apr-09	Healed corneal ulcer	
Leopard	08-Apr-09	Complications of chronic glomerulonephritis	
White Rhino	17-Apr-09	Suspected tuberculosis	
White Rhino	23-Apr-09	Salmonella enteritis	
White Rhino	18-May-09	Severe generalised lymphadenitis	
Small spotted Genet	08-Jun-09	Bronchointerstitial pneumonia	
Lion	29-Jun-09	Tuberculous pericarditis, epicarditis and pneumonia	
African buffalo	07-Jul-09	Reactive lymph nodes (no TB found)	
African buffalo	21-Jul-09	Reactive lymph nodes and myocardial cestodiasis	
Nile crocodiles	24-Jul-09	Pansteatitis	
Greater Kudu	07-Aug-09	Vermiform cellulitis	
Black Wildebeest	02-Sep-09	Granulomatous pneumonia, hepatitis, lymphadenitis (Dr B Morna et al)	

Conclusion

– Wildlife disease monitoring

- Training (vets and pathologists)
- Operational capacity (necropsy kits, processing)
 - Electronic databases
 - Research
 - Regional collaboration
 - Publications



Thank you for the opportunity