

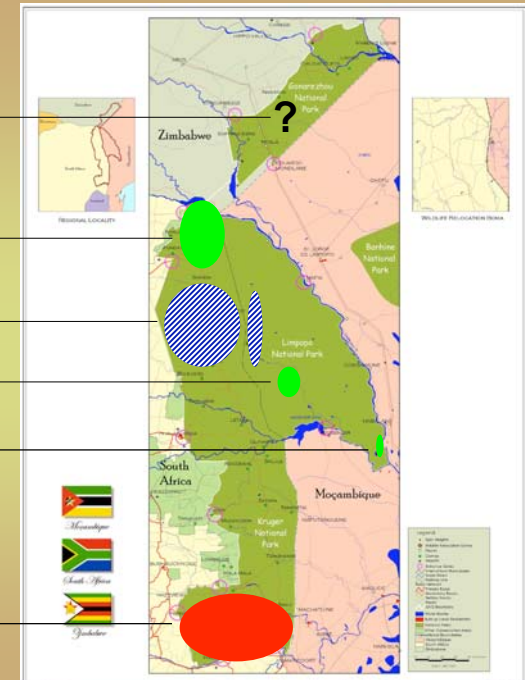
Results of the bovine tuberculosis (BTB) surveys that were completed during 2005 and 2006

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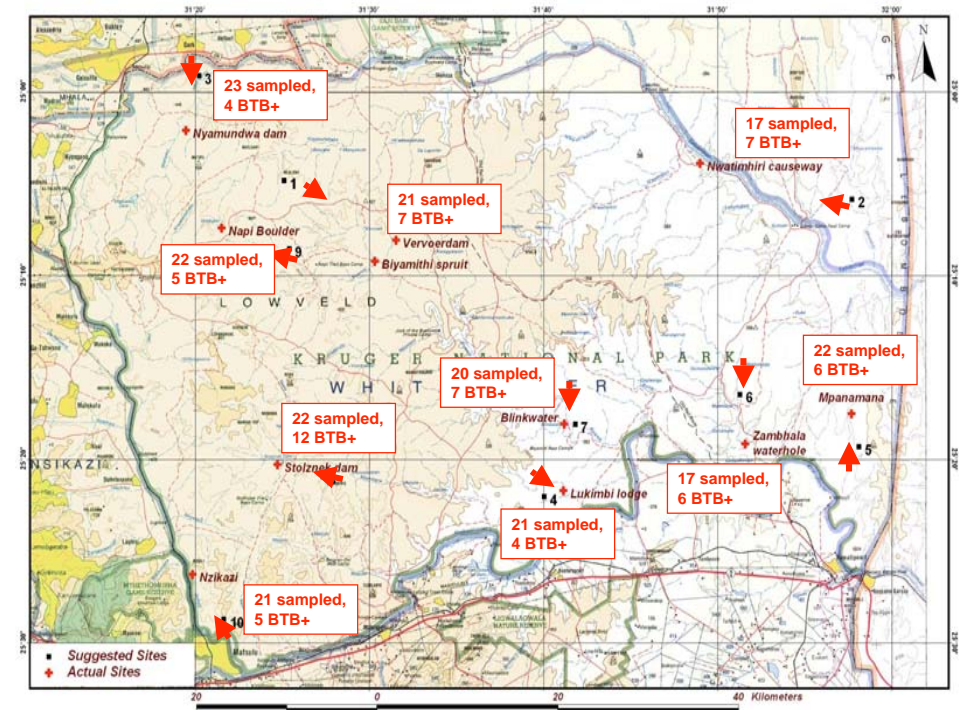
BTB Surveys

- 2008 Detection
- 2006 Prevalence
- 2007 Prevalence
- 2006 Detection
- 2006 Detection
- 2005 Prevalence



Strategic planning for the 2005 lethal BTB survey south of the Sabie river

- Buffalo herds for BTB sampling were selected via random computer generation
- Red dots indicate the fixed GPS points as central reference of where sampling should have been done



Methodology and procedures

- Buffaloes were euthanased with a saturated solution of succinyl dicholine (scoline)
- Brain shots were delivered to all animals that were not dead after being darted
- Carcasses were transported to the abattoir where necropsies were performed
- Lymph nodes were removed from all the carcasses and presented for *M. bovis* culture (Minimum of 4 samples per buffalo)
- Samples from affected organs were also collected for histopathology

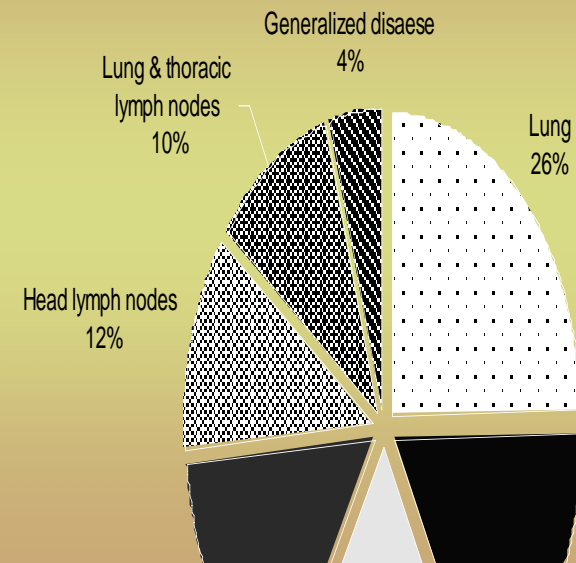
Results of the 2005 BTB survey

- A total of 206 buffaloes, which included 83 males and 123 females were sampled from 10 different herds south of the Sabie river
- There were 63 animals that had positive results for *Mycobacterium bovis*, using all available methods to determine their BTB status
- 13 of these animals were younger than the age of 2 years of which 5 were still calves

Results of the 2005 BTB survey

- The current prevalence for the area south of the Sabie river is thus estimated at 30.3% (Range 17.4% to 54.6%)

Distribution of lesions in buffalo carcasses

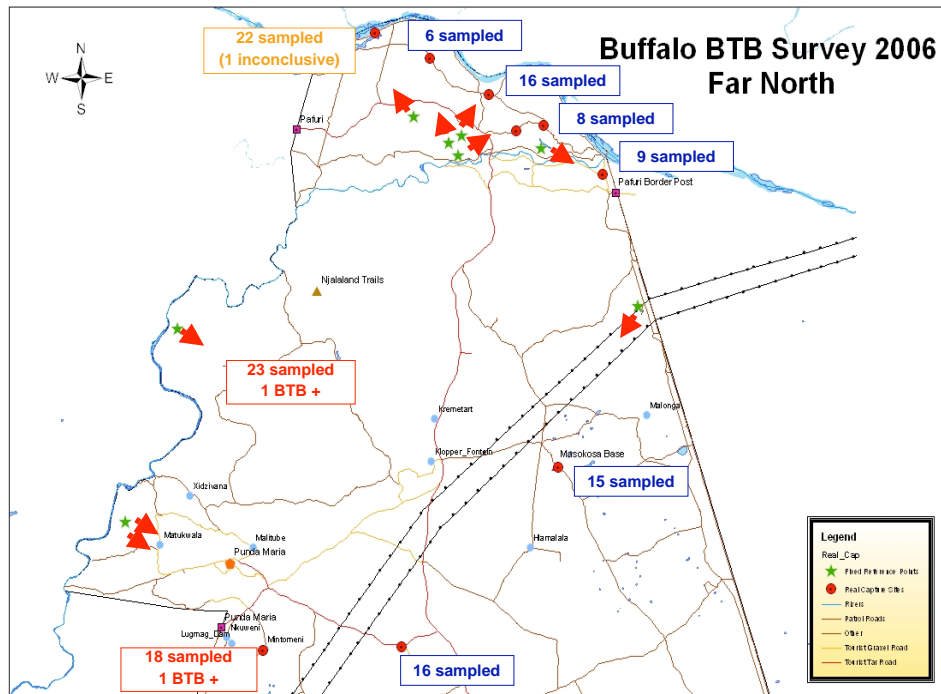


Conclusions of the 2005 BTB survey

- The BTB prevalence in different buffalo herds varied from 17 - 55%
- The variation in prevalence rates could have been due to sampling error or just simple animal association behaviour
- The prevalence of BTB has not increased since the previous surveys (1996 – 1999) therefore suggesting that the disease might be reaching a plateau phase
- The prevalence is not expected to increase in the near future unless there is dramatic change to environmental conditions

Strategic planning for the 2006 live BTB survey in the far north

- Buffalo herds for BTB sampling were selected via random computer generation
- Red dots indicate the fixed GPS points as central reference of sampling and the yellow dots are the herds that were not sampled



Methodology and procedures

- Buffaloes were darted with standard dosages of M99 (etorphine) for proper immobilization
- All the buffaloes were painted with large silver numbers for identification. Radio-collars were fitted to some animals for relocating the herd
- Blood samples were collected via jugular puncture and the interferon-gamma assay was used to determine the BTB status of each individual
- Test positive animals were euthanased and samples sent for culture and histopathology

Results of the 2006 BTB survey

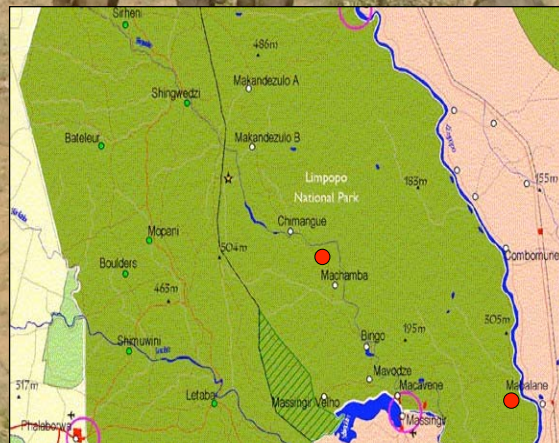
- A total of 133 buffaloes, which included 55 males and 78 females were captured from 12 different herds
- Two animals were found to be positive for BTB

Conclusions of the 2006 BTB survey

- Buffalo herds were found all along the Limpopo river during this survey as apposed to being along the Luvuvhu river during the 2005 survey
- Before and after the BTB survey, two buffaloes were found north of the Luvuvhu river with extensive BTB
- Bovine tuberculosis has reached the northern boundary of the Kruger National Park
- The prevalence of BTB in the far north is estimated to be between 1 - 5%

Strategic planning for the Limpopo National Park BTB survey (Moz)

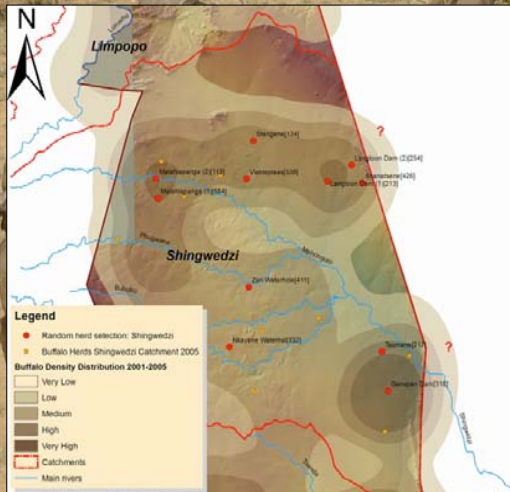
- Known resident buffalo herds were targeted to determine their BTB status
- Red dots indicate the fixed GPS points where buffalo herds were last recorded



Methodology and procedures

- Buffaloes were darted with standard dosages of M99 (etorphine) for proper immobilization
- All the buffaloes were painted with large silver numbers for identification. Radio-collars were fitted to some animals for relocating the herd
- Blood samples were collected via jugular puncture and the interferon-gamma assay was used to determine the BTB status of each individual
- Test positive animals were euthanased and samples sent for culture and histopathology

Strategic planning for BTB monitoring during 2007



- Red dots indicate the buffalo herds selected for BTB sampling in the Shingwedzi river catchment
- Buffalo herds believed to be moving between KNP and LNP will also be sampled
- Methods applied will be as for other live captures