

## **Protected Areas, Human Livelihoods and Healthy Animals:Ideas for Improvements in Conservation and Development Interventions**

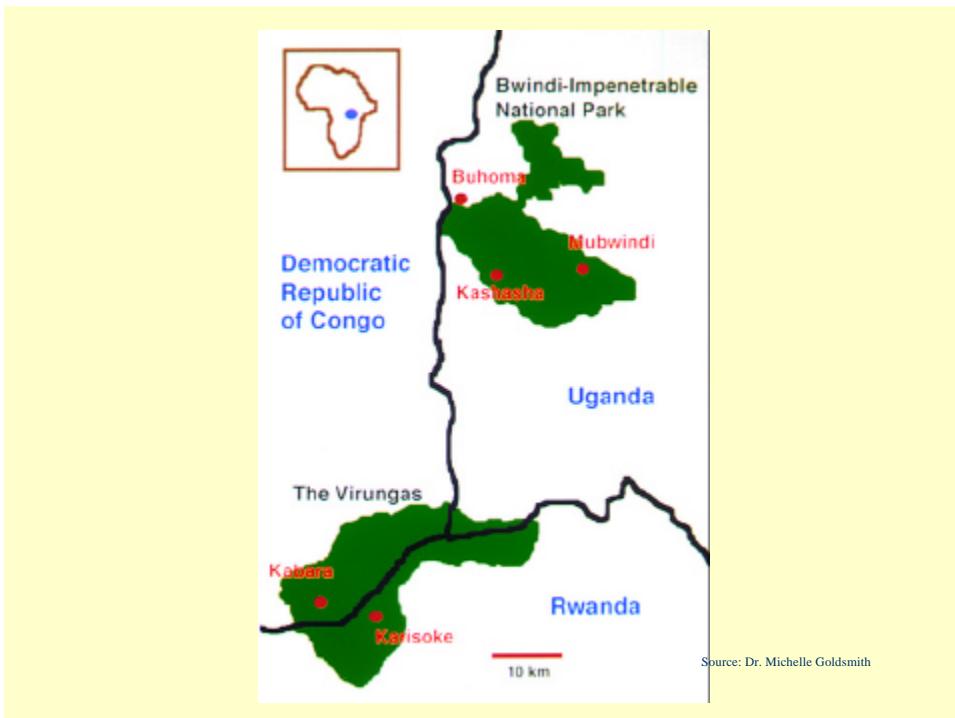
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### **Introduction**

- Effective protected area management is undermined by zoonotic diseases
- Marginalized target group
- Poorest people in the country
- Problem wildlife
- Very limited access to health care and information on human and animal diseases



## Human/Primate Interaction

- Scabies skin disease outbreaks in two mountain gorilla groups (1996 and 2000)
- Bwindi Impenetrable National Park
- Death of an infant
- Morbidity in the rest of the groups
- Recovered with Ivermectin treatment
- Challenging treatment and follow up



## Human/Primate Interactions

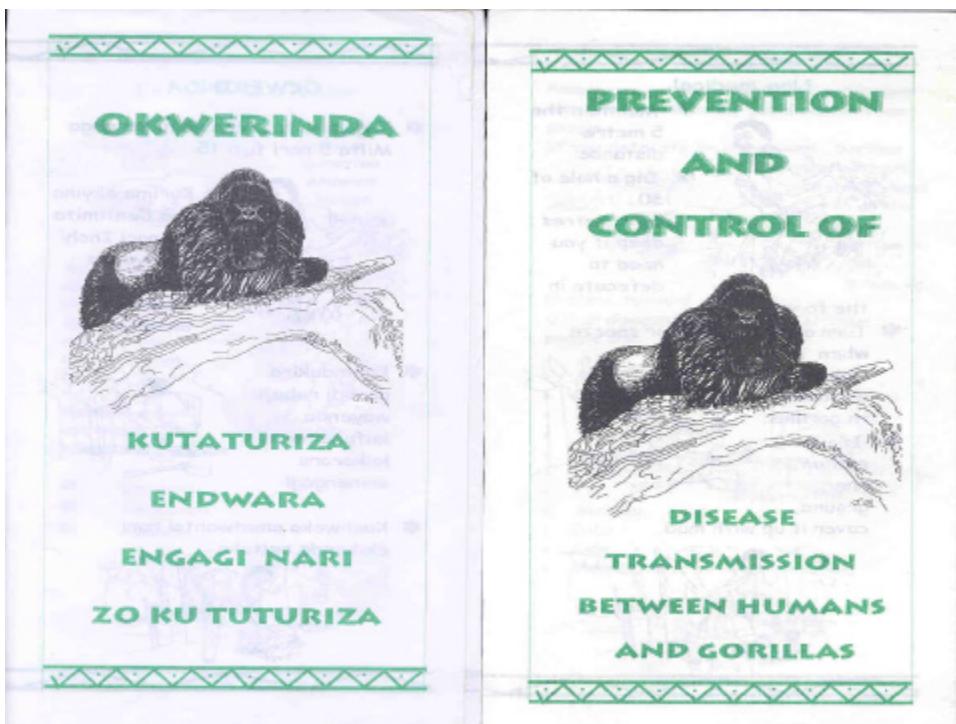
- Close human/gorilla genetic relation
- Fragmented patches occupied by the poorest people leads to problem gorillas
- Relatively high incidence of scabies in the local community
- Difficult access to clean water prevents frequent washing of clothes

## Human/Primate Interactions

- Theories
  - Gorillas coming into contact with contaminated clothing when ranger guides/porters take tourists and researchers for tracking
  - Gorillas raiding crops and finding dirty clothing in the gardens

## Health Education

- > 1000 people in high conflict areas
- 8 workshops, 5/19 parishes
- Participatory Rural Appraisal methods
- All age groups (men, women, children)
- Multidisciplinary team (Uganda Wildlife Authority, International Gorilla Conservation programme, District Health Authorities)



## Health Education

- Tuberculosis
- Scabies
- Measles
- Polio
- Ebola
- Intestinal parasites
- Ringworm
- Trachoma
- Herpes
- Lice
- Typhoid
- Flu

**Non-medical**



- \* Maintain the 5 metre distance.
- \* Dig a hole of 30 centimetres deep if you need to defecate in the forest.
- \* Turn away to cough or sneeze when in close distance to gorillas.
- \* If you spit on the ground, cover it up with mud.



People can get diseases from gorillas and also gorillas can easily get diseases from people.

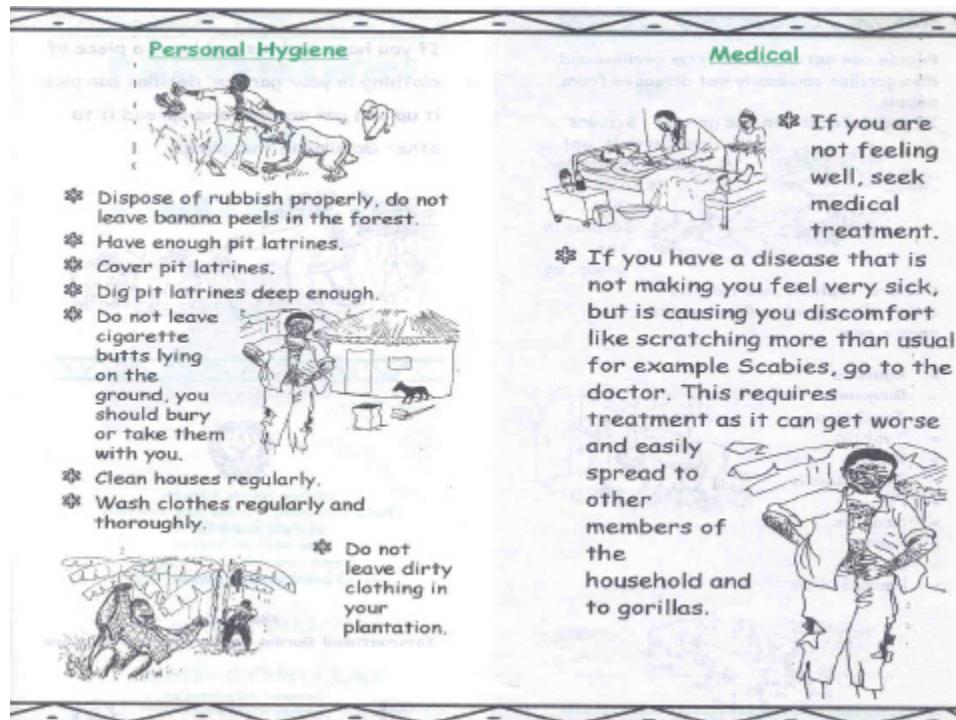


If you defecate on the ground, Gorillas can taste it, get sick and spread it to all the other Gorillas in the group, e.g. Cholera, typhoid , worms etc.

Other diseases gorillas can get from people are:

- > Measles
- > Ringworm
- > Trachoma
- > Typhoid
- > Worms
- > Tuberculosis
- > Flu
- > Scabies
- > Polio
- > Lice
- > Herpes virus





## Health Education Local Community Recommendations

### Medical

- Bring health and diagnostic services closer

### Non-medical

- Strengthen human/gorilla conflict team, compensation for crop damage

### Personal Hygiene

- Dig proper pit latrines, cover rubbish heaps, more health education

## Health Education Lessons Learned

- Parishes that benefited from gorilla tourism were most receptive
- Communities were more receptive to a multidisciplinary team
- Problem animals undermined the benefits of tourism revenue sharing funds for community development





## Cattle/Wildlife Interactions

- TB surveys in Queen Elizabeth National Park (1960s to 2001)
- AWF Charlotte Fellowship Award
- Greater level of TB in cape buffalo in the interior (21%) than at the periphery (5%)
- TB in cattle at the periphery is 5%
- 42% of people did not boil their milk

## Cattle/Wildlife Interactions

- Illegal grazing of cattle in the park
- Bovine TB could potentially be transmitted from buffalo to cattle to people
- Local community education on zoonotic diseases and food hygiene may help to reduce exposure to TB
- Uganda among 22 countries with highest TB infection (WHO), exacerbated by 35% HIV co-infection

## Ideas for Improvements

### **Integrated approach more cost effective**

- ✓ Sharing health information between medical, veterinary and wildlife sectors
- ✓ Combining programs (education, health, ICT, training) that benefit wildlife conservation and public health
- ✓ Multidisciplinary teams

## Ideas for Improvements

- ✓ Wildlife managers and tour operators can deliver medication from the capital city to the communities around PAs
- ✓ Joint health education, health monitoring and laboratory diagnosis
- ✓ Research on interrelated public health and conservation issues
- ✓ Redistribution of health and conservation funds

## For more information on Conservation Through Public Health



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