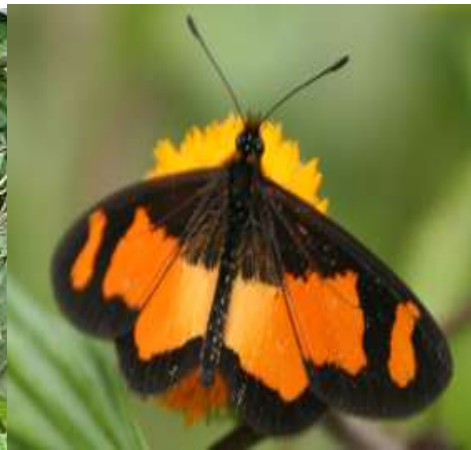


Karisoke Research Center Biodiversity Research and Monitoring

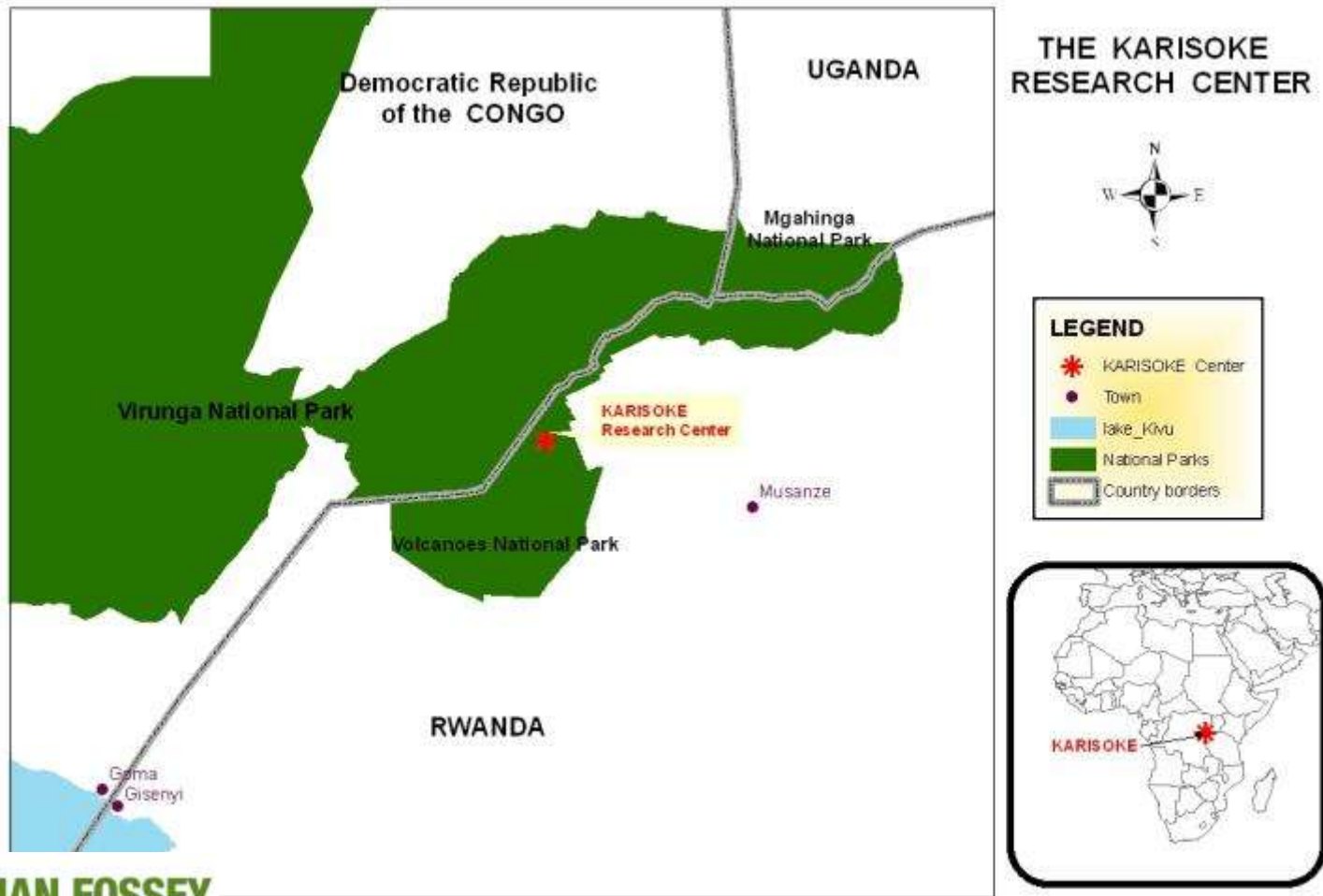
By
Deo Tuyisingize



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Study area



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Karisoke Research Center (KRC)

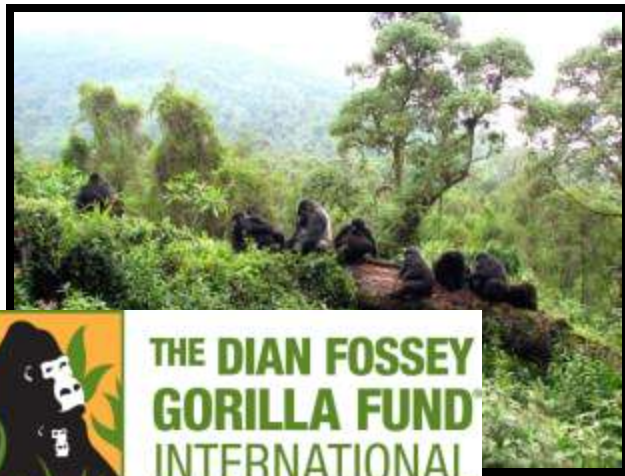
- Established 1967



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Karisoke Research Center: Today

- Gorilla research program
- Continued protection and monitoring
- Development of community health and education programs
- **Establish and consolidate biodiversity research program**



1. Behavioural ecology of the golden monkey

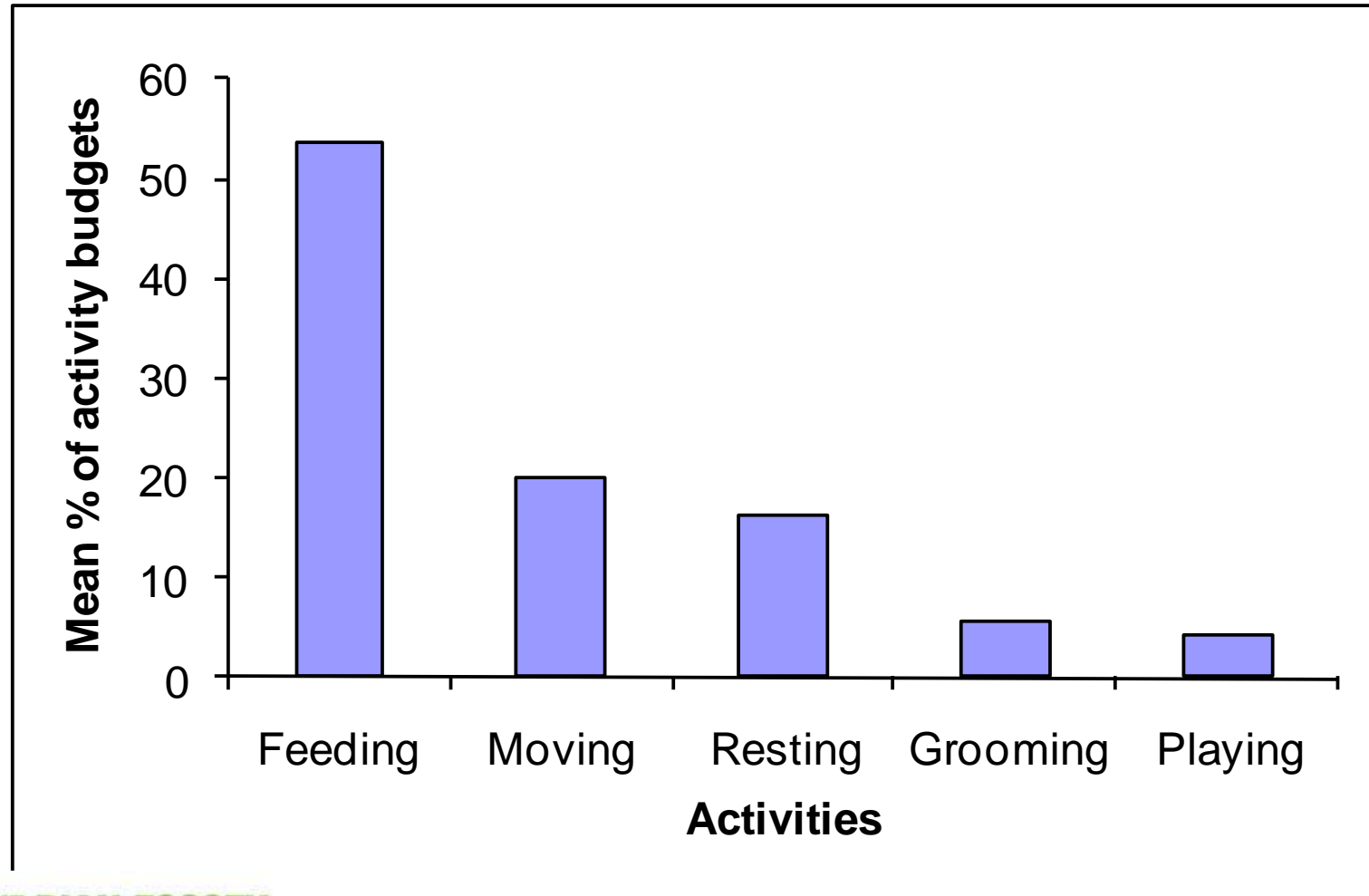


- Two groups habituated: Kabatwa (K) and Musonga (M)
- Habituation process 2002-2003
- Research: From 2004

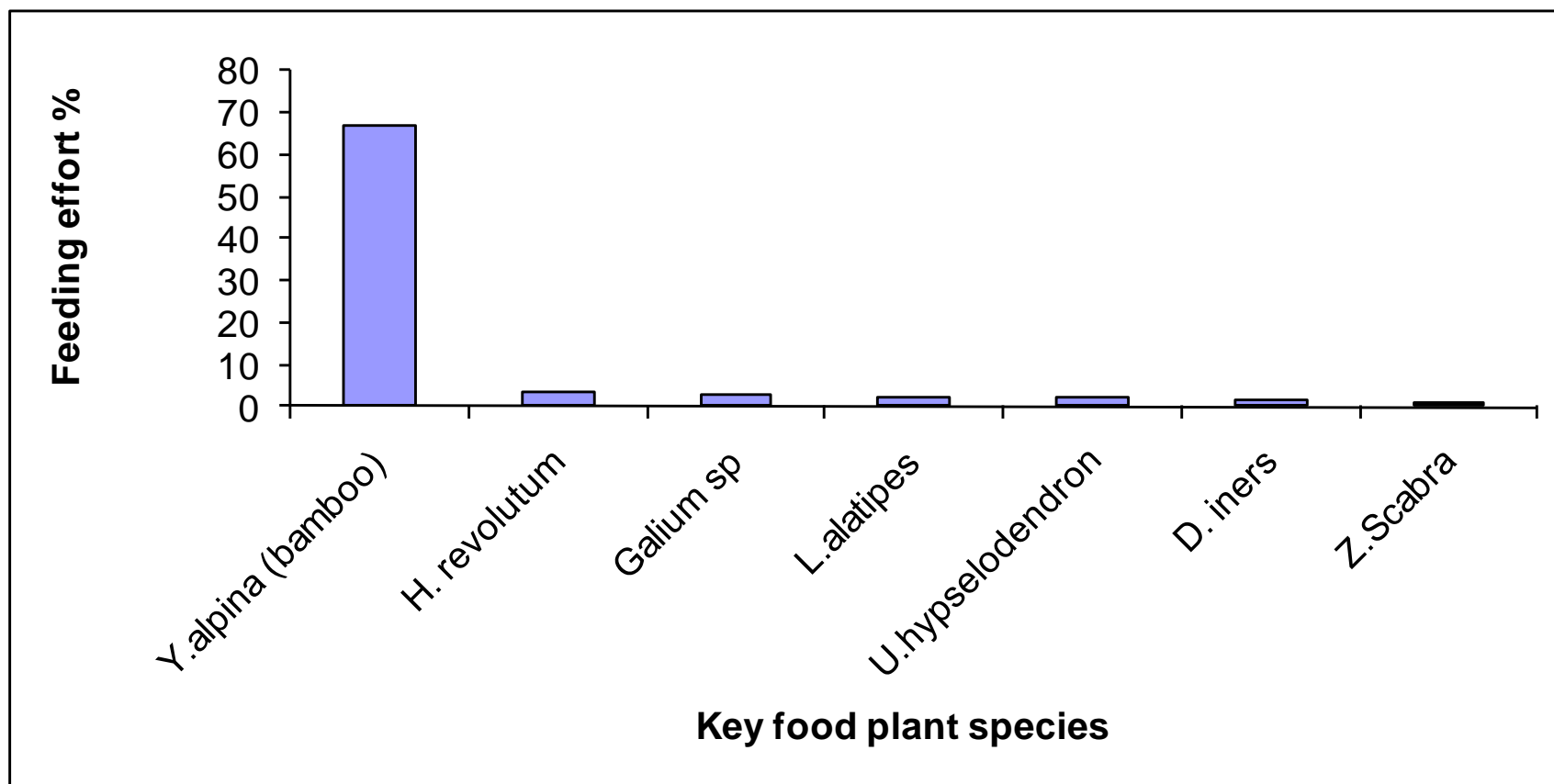
Group size and structure

- Age/sex class:
 - ✓ Dominant adult males (DAM) > 6
 - ✓ Adult males (AM) > 6
 - ✓ Adult females (AF) > 5
 - ✓ Juveniles (JUV) estimated between 2.5 and 5
 - ✓ Infants (INF) estimated to be between birth and 2.5
- The group count ranged between 84 – 123 individuals in group K and 83-94 individuals in group M
- Adult females making up the majority of both groups members
- There is commonly one dominant adult male and extra males join kin groups temporarily for reproduction
- Differences in breeding season
- Home ranges have been stable

Activity budgets



Key important food types

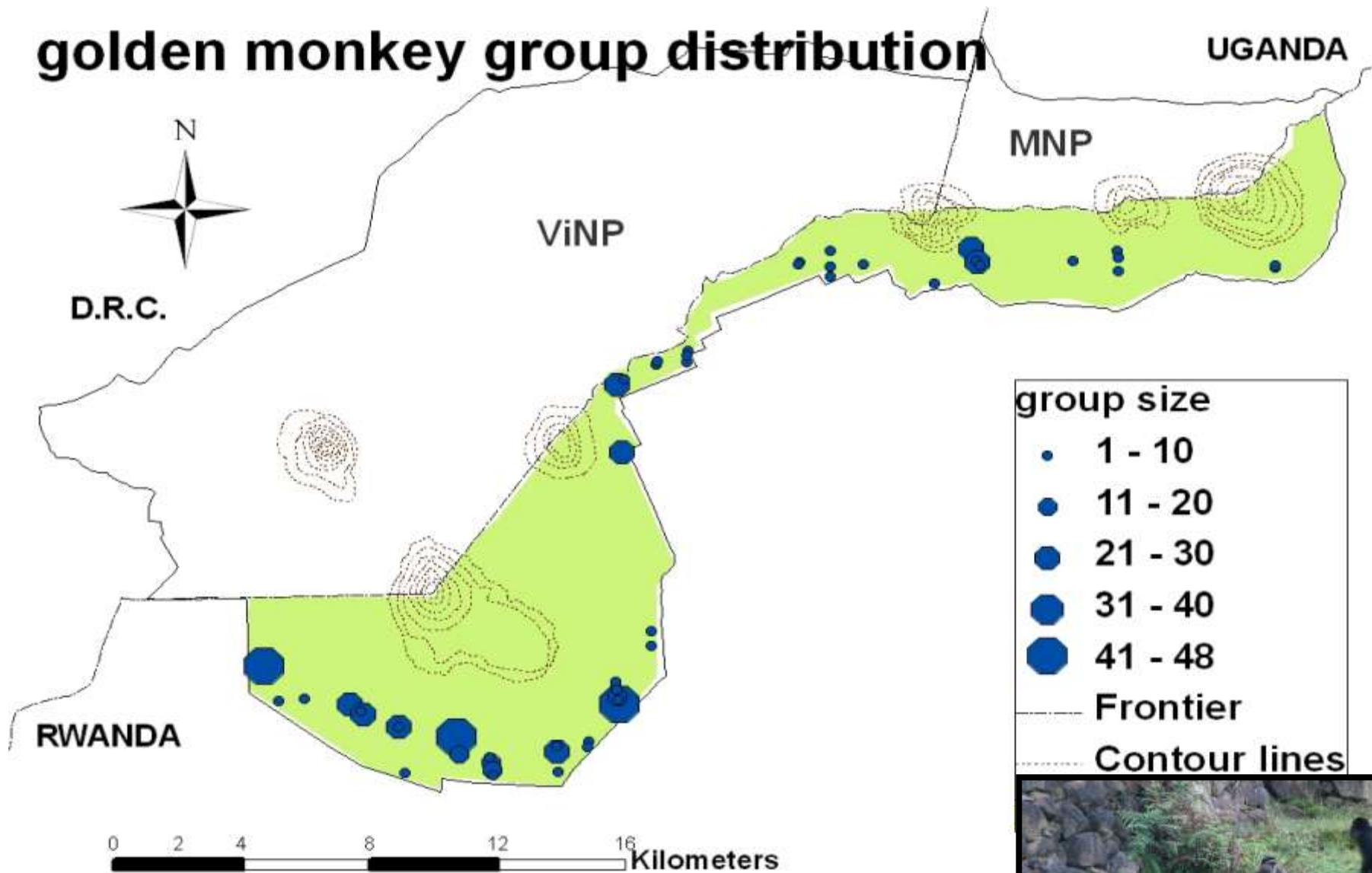


2. Golden monkey surveys

PAs	VNP 2007	MGNP 1998	MGNP 2003
Group density	6	6.03	4.28
Group size	18	30	17.1
Total	4815±2893	2438±1463	989±521.5
Area Km ²	51.5	33.7	33.7

- The second golden monkey survey was launched in Feb 2011

golden monkey group distribution



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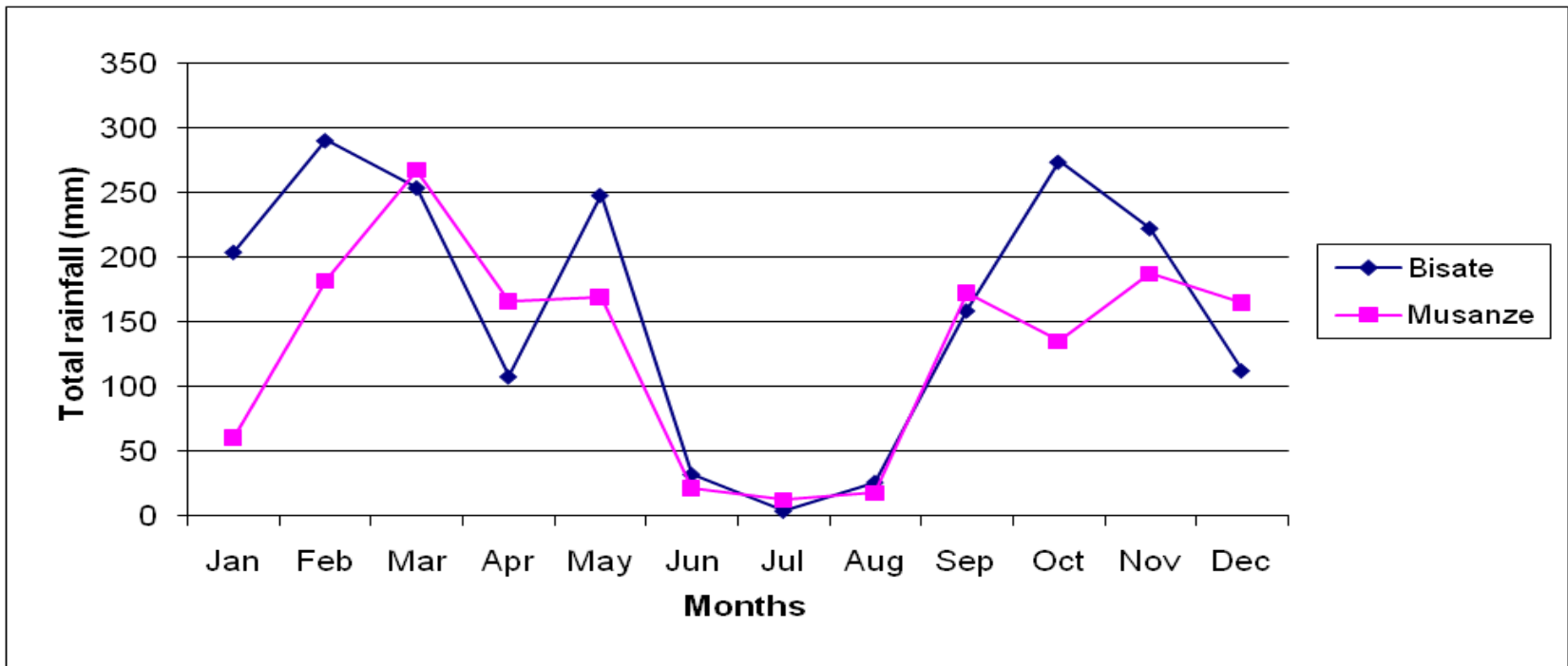
3. Phenology in bamboo habitat

- Started in 2006
- Assess the phenology process of the species eaten by golden monkey.
- **Some results:**
- Seasonality in bamboo shoot occurrence, generally in overlap with the two rainy seasons.



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4. Monitoring of environmental parameters: Rainfall



Two rain seasons and two dry seasons



5. Birds ecology



Status of species	Number
Total bird species	144
Families	41
Bird species on IUCN list	3
Endemic to Albertine Rift	15
Forest interior species (FF)	24
Forest specialised (F)	43
Forest visitors (f)	20



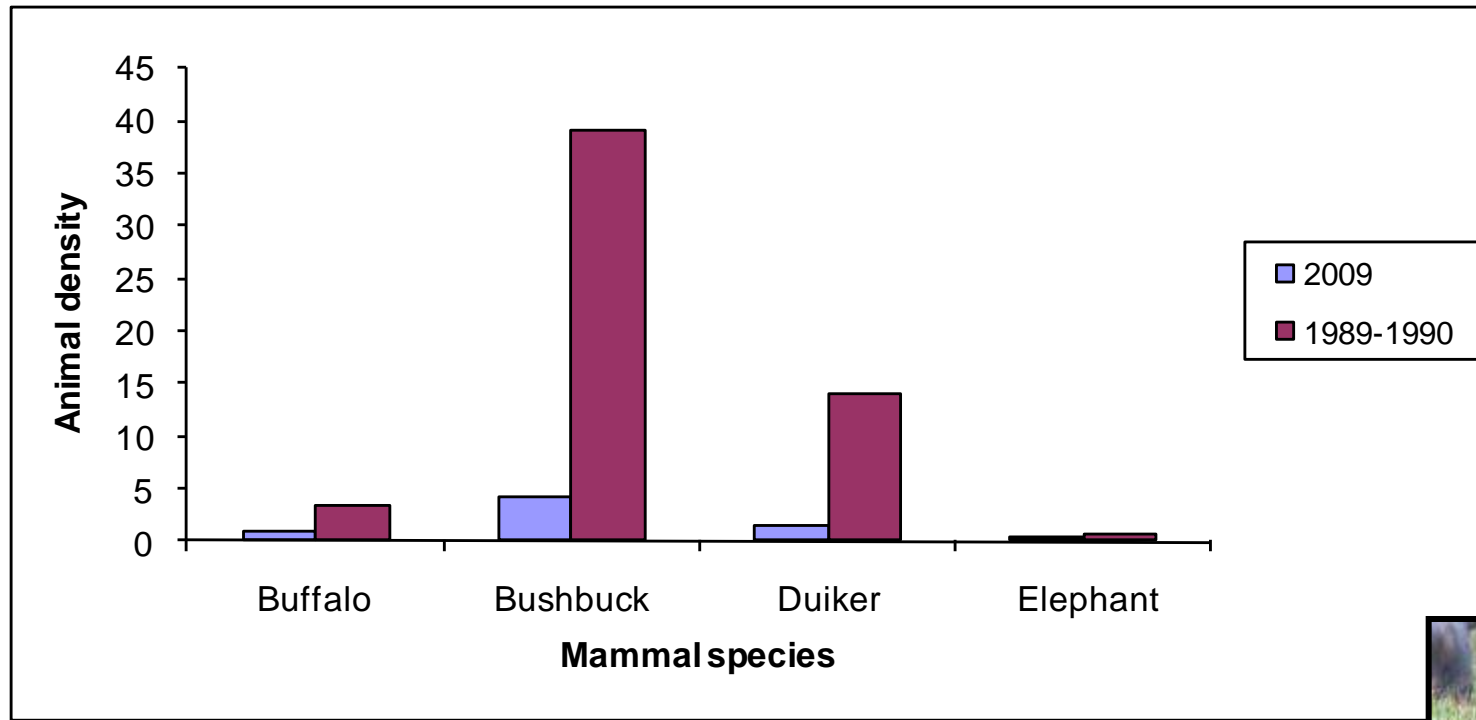
Common bird monitoring

- Started in 2008,
- Data collected every year from June-August
- Point count method, revisit the same plots
- In 2010:107 bird species recorded in the VNP including 15 Albertine Rift Endemic (ARE) species.
- Five common ARE species (Ruwenzori turaco, Regal sunbird, RDCSunbird, Collared apalis and Ruwenzori sunbird)
- ARE birds are being recorded from Feb



6. Changes in large mammals

- Marked-pellet group count method was used to collect field data in for twelve months from Dec 2008- Nov 2009.
- Alarming decline in buffalo and elephant numbers



Similar studies should be repeated each five years



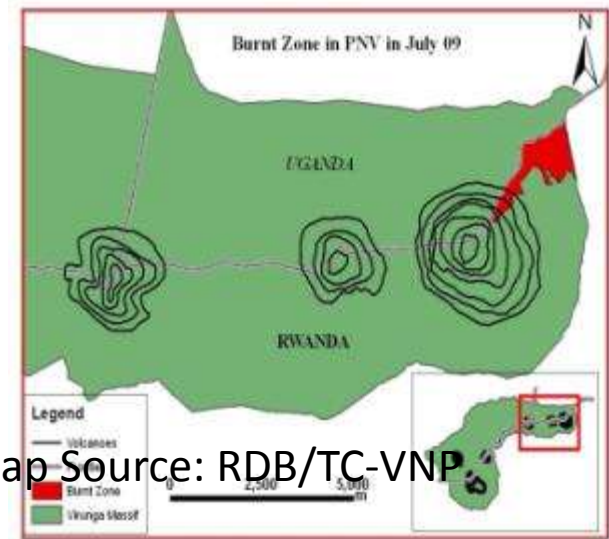
7. Small mammals at VNP

- Study period: Oct 2009
- Trapping methods: Snap and live traps

Species	IUCN Status	ARE	New at VNP
<i>Crocidura nigrofusca</i>	Least Concern	No	Yes
<i>Crocidura olivieri</i>	Least Concern	No	No
<i>Galerella sanguinea</i>	Least Concern	No	Yes
<i>Graphiurus murinus</i>	Least Concern	No	Yes
<i>Hylomyscus vulcanorum</i>	Least Concern	Yes	No
<i>Lophuromys woosnami</i>	Least Concern	Yes	No
<i>Mus bufo</i>	Least Concern	Yes	Yes
<i>Praomys degraaffi</i>	Vulnerable	Yes	No
<i>Sylvisorex vulcanorum</i>	Near Threatened	Yes	No
<i>Thamnomus spp.</i>	Least Concern	No	No
<i>Tachyoryctes ruandae</i>	Least Concern	Yes	No

8. Post-fire regeneration at Mt Muhabura

- Students internship project by KRC from August 2010
- 60 plots located in burnt and non-burnt area established every 25 m (2500-3300 m).
- Ericaceous plants showed no sign of regeneration, which could be due to their highly flammable phenolic compounds that lead into roots and intensify fire
- Great number of regenerating woody sprouters
- Same plots are revisited every year in August



Map Source: RDB/TC-VNP

9. Butterfly distribution at VNP

- Students internship project by KRC launched in August 2010
- Plots located systematically along altitudinal gradient (2700-3710m). Sampled every year in August
- 17 species from 5 families across 7 habitats types were identified.
- Species decreased with the altitude.
- Same plots are revisited every year in August



Key future priorities

1. Continue research on species dynamics and impact of environmental change through long-term monitoring of key indicator and threatened species and their habitat.
 1. Amphibians and reptiles
 2. Carnivores
 3. Gorilla food plant biomass
 4. Monitoring bamboo
 5. Gorilla plant food phenology
2. Capacity building and training of regional conservation biologists (i.e. NUR students, TCCB).



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- Rwanda Development Board
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- Chicago Field Museum (USA)
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- Max Plank Institute (Germany)
- University of Cambridge (UK)
- Primate Conservation Inc
- Cleveland Zoos

