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THE PHENOLOGY OF MUSANGA LEO-ERRERRAE AND ITS IMPORTANCE TO CHIMPANZEES (*Pan troglodytes schweinfurthii*) IN KALINZU FOREST, UGANDA.

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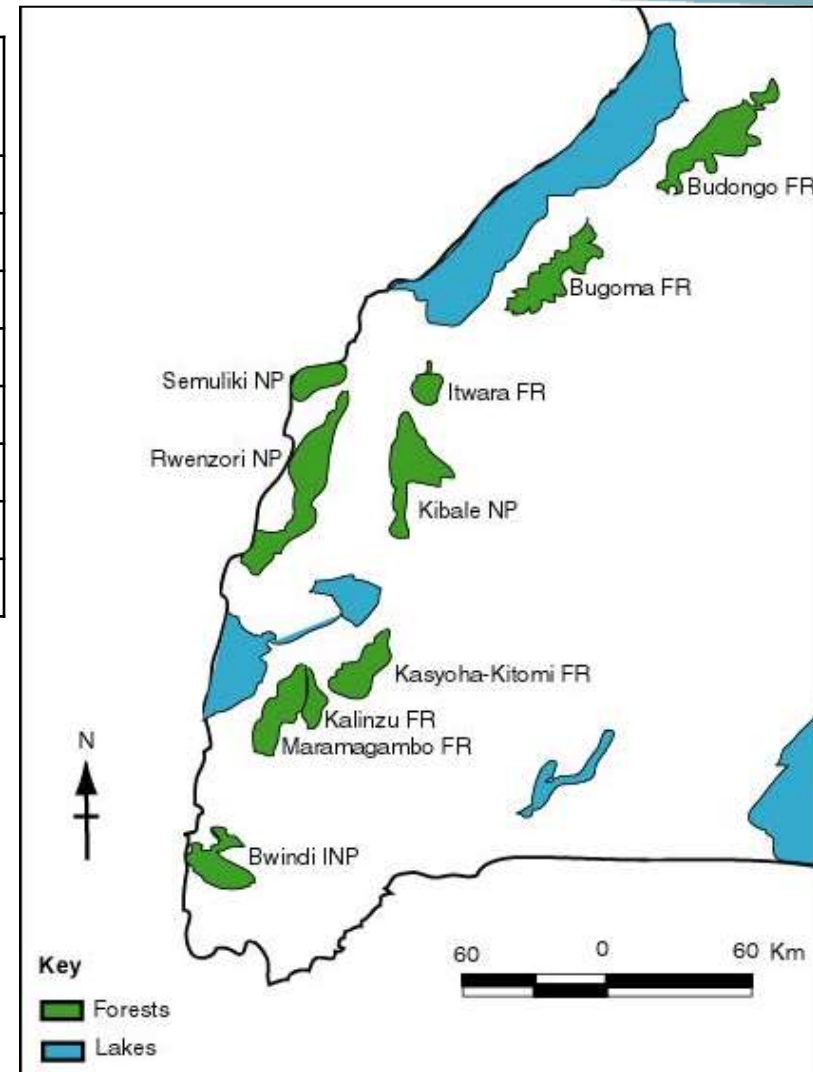
- ❁ **Four sub species in Africa**
 - ❁ *Pan troglodytes schweinfurthii*
(eastern Chimp) in Uganda



Location	Size (km ²)	Tree species (% country total)	Population	Density
Kibale NP	795	209 (49%)	1420	2.32
Bugoma FR	365	158 (36%)	630	1.90
Kalinzu FR	137	265 (57%)	230	1.55
Budongo FR	793	240 (56%)	640	1.36
Itwara FR	97	143 (33%)	130	1.35
Kasyoha FR	399	204 (47%)	410	0.92
Rwenzori NP	996	75 (18%)	500	0.46
Bwindi NP	321	163 (38%)	210	0.43

(Howard, 1991; Plumptre, 2003)

1. Relatively high chimpanzee density
2. Diverse tree species
3. Less farmer-wildlife conflicts



Occurrence of *Musanga*

- ❖ **Secondary tree sp**
- ❖ **Occurs in Bwindi Impenetrable & Itwara forests (Howard, 1991)**
- ❖ ***M. cecropiodes* recorded as an important food sp to primates in D.R.C Thomas, 1991; Bossou (Yamakoshi, 1998)**



Data collection

❁ Faecal analysis

- ❁ 2635 samples
- ❁ Ficus sp taken as one sp

❁ Using ten 5km transects

- ❁ Fruit census of all fruits (every fortnight)
- ❁ Fruit phenology & monitoring of *M. leo-errerae* (weekly)

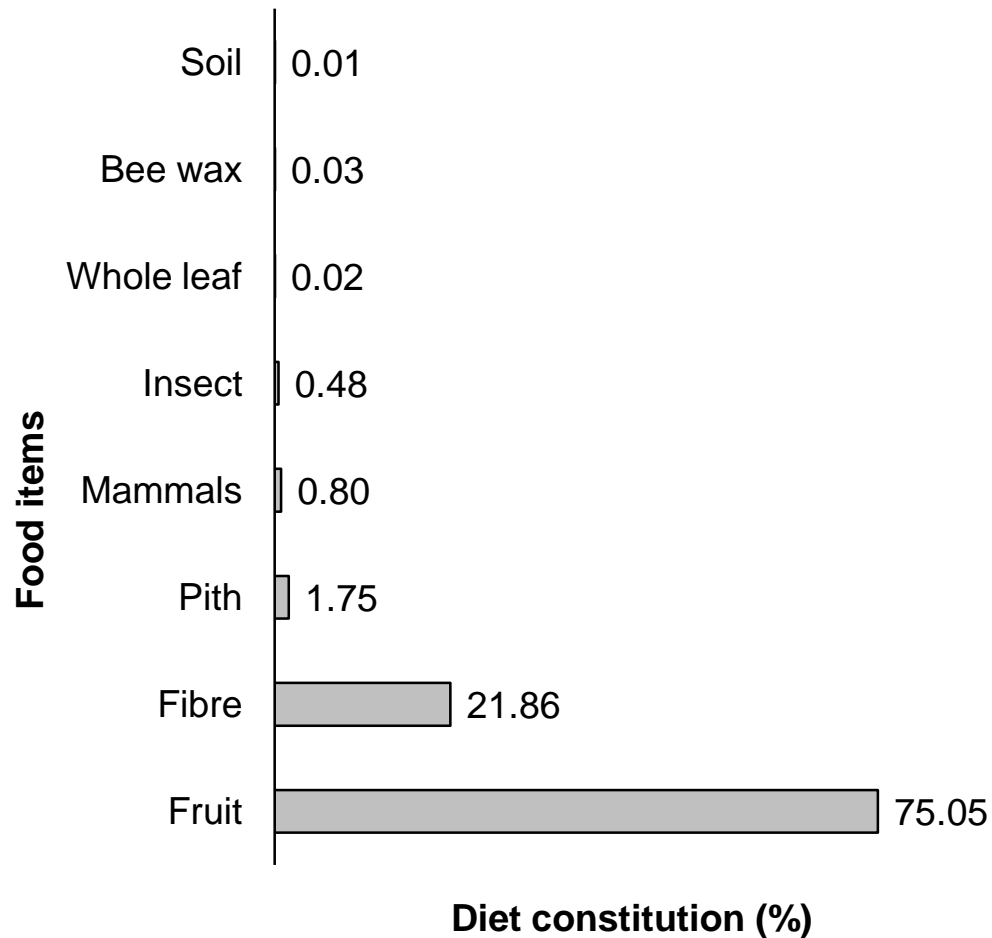


RESULTS



Chimpanzee diet choices

Chimpanzees are primarily frugivorous

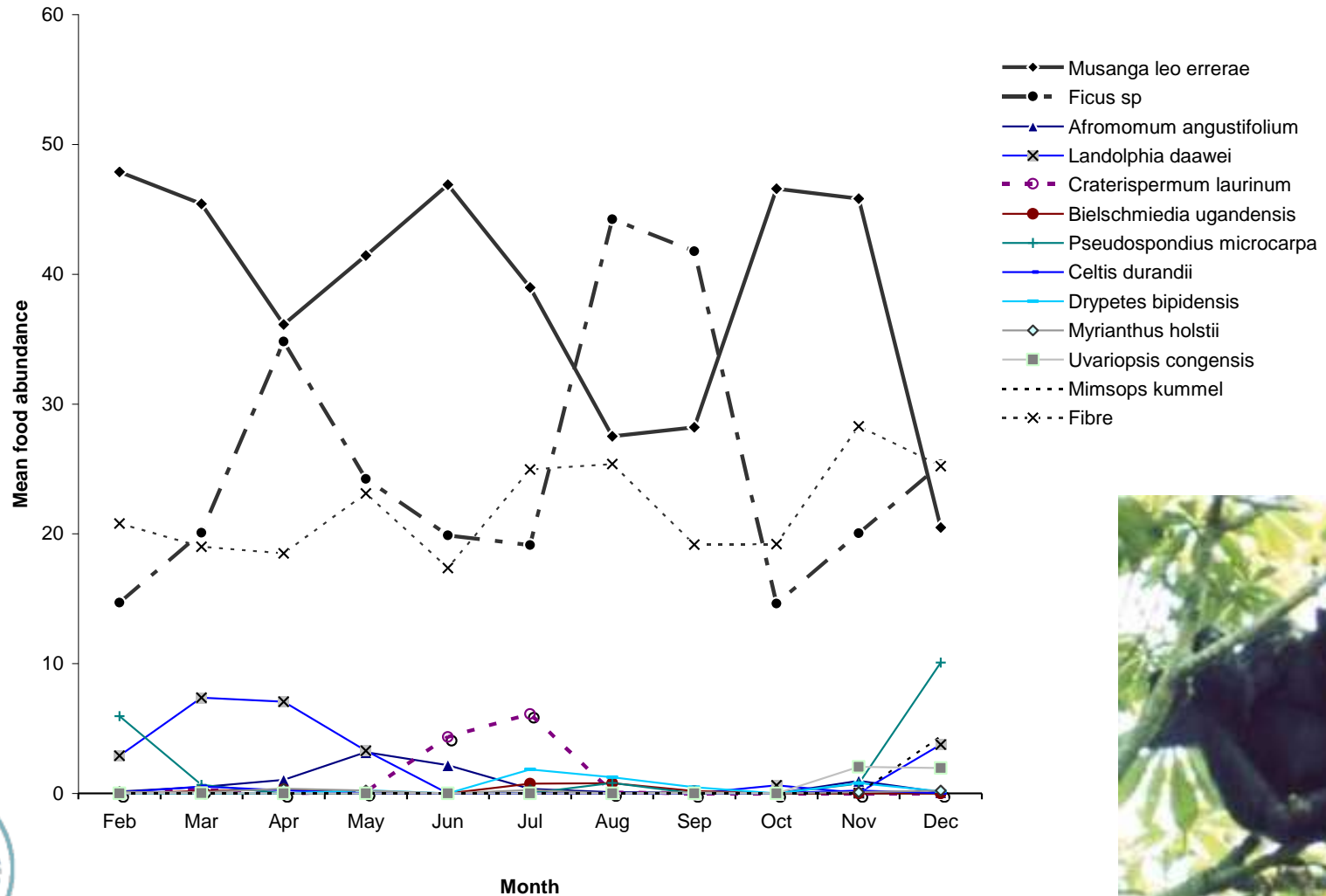


Frequency of occurrence of fruits in faecal samples

SPECIES	FAMILY	LIFE FORM	Total faeces	Mean %
<i>Musanga loe-errerae</i>	<i>Urticaceae</i>	Tree	2007	76.5
<i>Ficus sp</i>	<i>Moraceae</i>	Tree	1714	66.4
<i>Afromomum angustifolium</i>	<i>Zingiberaceae</i>	Herb	500	20
<i>Landolphia dawei</i>	<i>Apocynaceae</i>	Tree	330	26.4
<i>Phytolacca dodecandra</i>	<i>Phytolacaceae</i>	Shrub	125	16.9
<i>Peudospondias microcarpa</i>	<i>Anacardiaceae</i>	Tree	178	20.7
<i>Myrianthus holstii</i>	<i>Moraceae</i>	Tree	46	6.8
<i>Celtis durandii</i>	<i>Ulmaceae</i>	Tree	70	6.1
<i>Bielschmiedia ugandensis</i>	<i>Lauraceae</i>	Tree	38	2.7
<i>Craterispermum laurinum</i>	<i>Rubiaceae</i>	Tree	212	22.3
<i>Drypetes bipindensis</i>	<i>Euphobiaceae</i>	Tree	69	11.3
<i>Solanum terminale</i>	<i>Solanaceae</i>	Shrub	22	5.5
<i>Uvariopsis congensis</i>	<i>Annonaceae</i>	Tree	12	7.6
<i>Monodora myristica</i>	<i>Annonaceae</i>	Tree	29	8.7
<i>Mimusops bagshawei</i>	<i>Sapoptaceae</i>	Tree	21	18.9



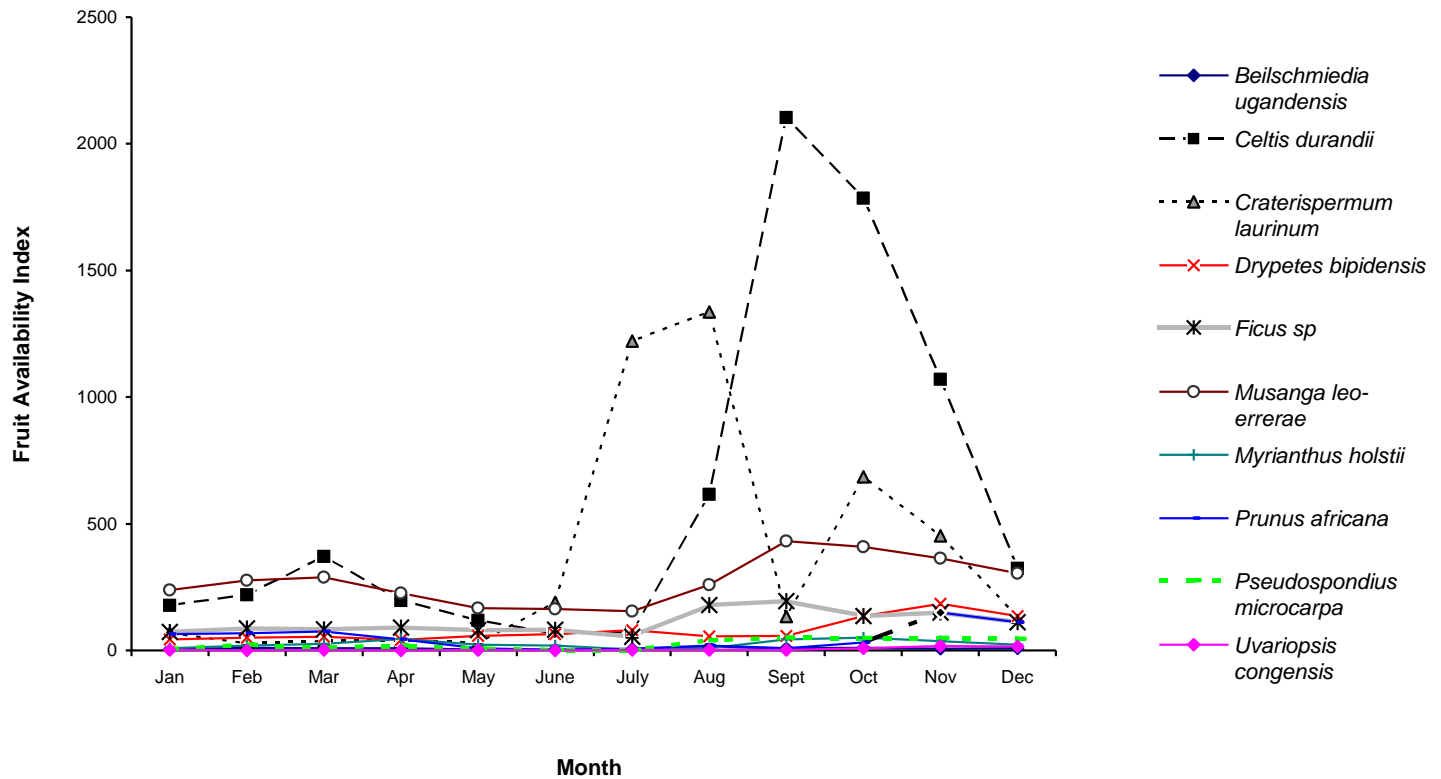
Abundance in diet



- ✿ **Of the total fruit diet (75%):**
 - ✿ *M. leo-errerae* contributed 37.2%,
 - ✿ *Ficus* contributed 26%
 - ✿ 11.8% as contribution by other fruit species
 - ✿
- ✿ ***Musanga* fruit abundance in diet was significantly higher than all other fruit abundance ($t = -2.034$; $P = 0.053$).**



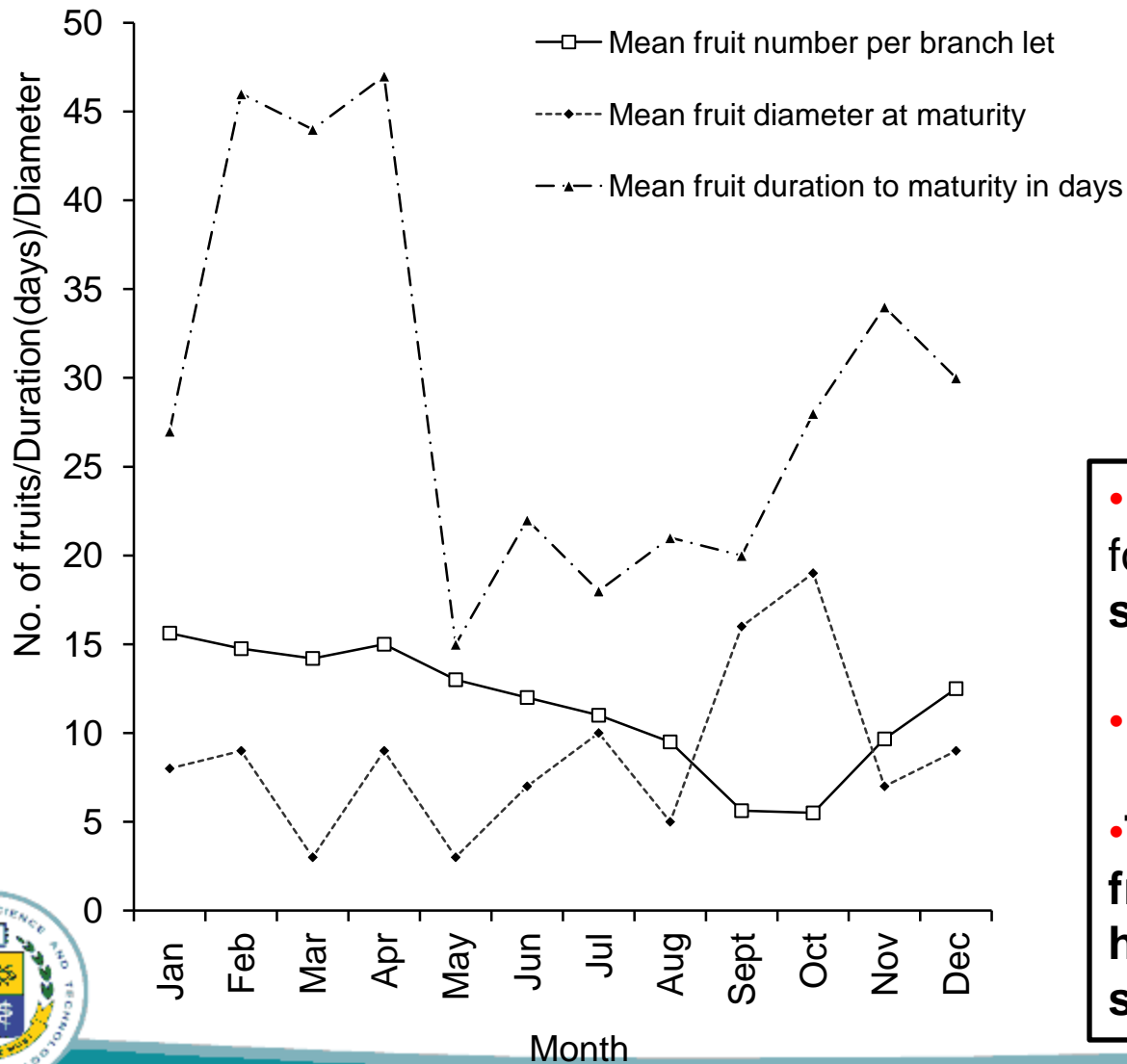
Fruit availability:



Musanga Fruit available all year round



Phenology



- **Durable fruit crops were found in the short wet season.**
- **Bigger fruits in sept - oct**
- **The maximum number of fruits occurred in the habitat-wide low fruiting season of January to April**



- ❖ **The sheath that encloses the bud develops and falls off three times a month on average.**
- ❖ **It reveals young leaves and fruits ranging from 6 to 16 on each branchlet that grow to maturity roughly within 29 days.**
- ❖ **Fruit production is higher in the dry season than the wet season**



Conclusion

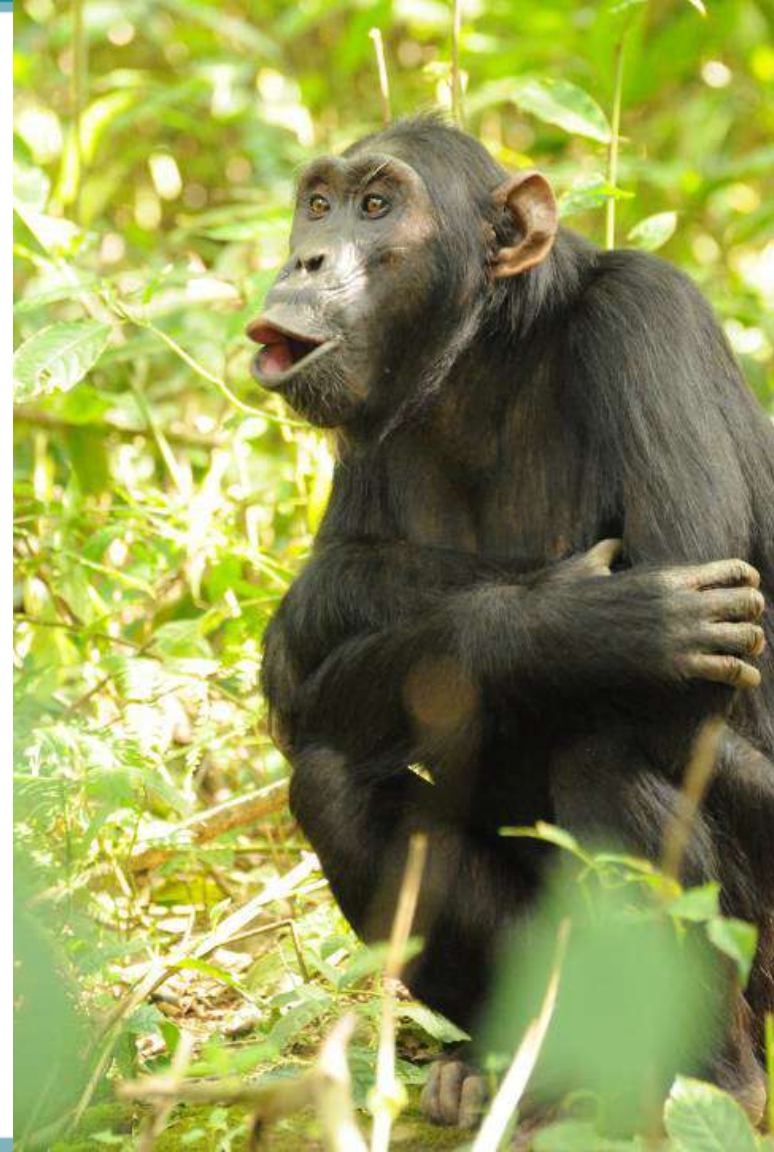
- ✿ *M. leo-errerae* fruit was abundant in the months of general fruit scarcity, February and July.
- ✿ There was no correlation between the abundance of *M. leo-errerae* fruit and its consumption ($r = 0.153$, $P = 0.456$).
- ✿ The perennial fruiting plays an important role in survival of chimpanzees

Where *M. leo-errerae* occurred in greatest density, is where chimpanzees ranged most.



Acknowledgements

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Kalinzu Forest...

