Interaction between *Lemur catta* and *Propithecus verreauxi* in the spiny forest at Berenty

They live in direct sympatry in this area, they may be confronted each others during their acitivities

Stsatistical question

What factors influence lemurs agressivity behavior during their confrontation ?

Mechanistical questions

How does *lemur catta's* movement changes over time from inside to outside the reserve

Thanks to Hoby , and Tatamo

Mihajatiana Raelison

Statistical question : What factors influence lemurs agressivity behavior during their confrontation ?

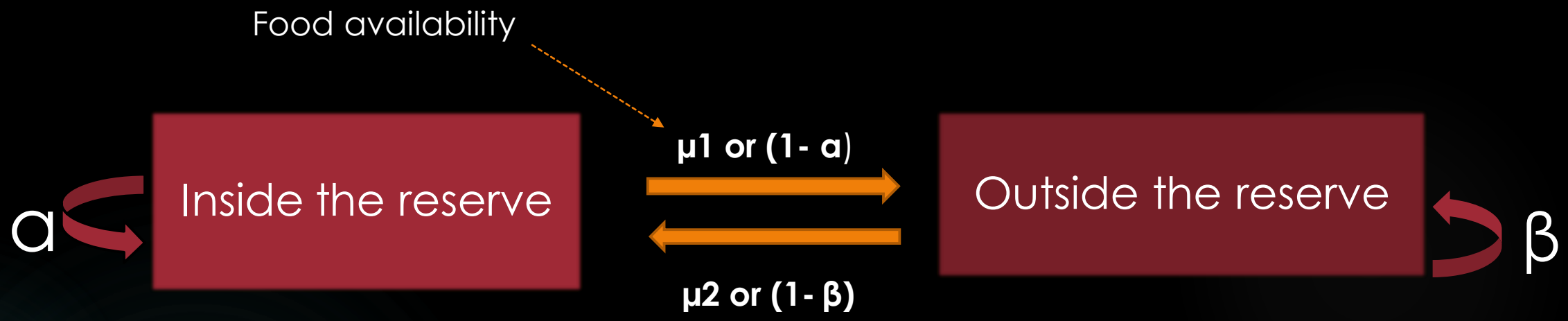
- **Explanatory variable**: Activities, eaten plants, eaten parts, height , group identity (*Lemur catta*, *Propithecus verreauxi)*
- **Response variable** : Lemurs Agressivity Behavior during confrontation : Agressive /non-agressive
- **Distribution** : Binomial
- **Link** : logit

Hypothesis : Lemurs agressivity behavior is more correlated with their feeding activity

Summary of my data :

- **Lemurs activities :** feeding,self or mutual grooming, sleeping, resting, moving,traveling, sunbathing
- **The name of each eaten plants**
- **Eaten parts**: Fruits, flowers, stems, leaves
- **The height in which they has been found :** classed n0, n1 (0 to 2m), n2 (2 to 4m), n3 (4 to 6m)
- **During confrontation** : reaction of the followed group, distance between the two confronted lemurs groups.

Mechanistical question: How does L.Catta's movement changes over time from inside to outside the reserve ?



Population : L.Catta's movement
States :
Inside the reserve
Outside the reserve

Process :

α : Probability for L.Catta to stay inside the reserve

β : Probability to L.catta to stay outside the reserve

μ1 : Probability of the migration of L.catta from inside to outside the reserve

μ2 : Probability of the migration of L.catta from outside to inside the reserve

$\alpha + \mu 1 = 1$

$\beta + \mu 2 = 1$

Next steps

- Modeling
- Fitting the model
- Writing