climate change and habitat disturbance impacts on the feeding ecology of the *Propithecus edwardsi*

Background

Disturbance decreased food availability of *P.edwardsi* and altered species composition and abundance in some habitats. (Summer Joyce, 2006).

Statistical question

What is the relationship between habitat type, temperature and feeding activity rate in *Propithecus edwardsi*?

. Mechanistic question

How does forest loss affect the density of *Propithecus edwardsi* through time?

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What is the effect of habitat type, temperature, rainfall on feeding rate in *Propithecus edwardsi*?

Statistical question

Response variable: rate of feeding

Predictor variables: habitat type, temperature, rainfall

Hypothesis:

- the rate of feeding activity would be correlated negatively with temperature and rainfall
- the feeding rate would be higher in disturbed habitat than in undisturbed habitat.

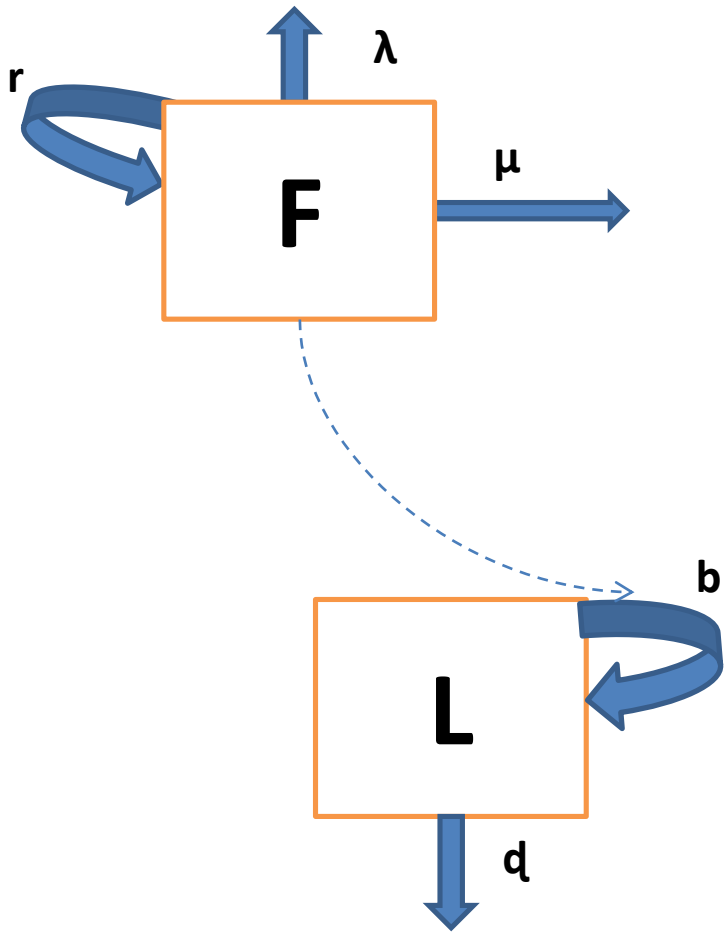
Distribution: normal

. R code

lm= (rf ~ temperature +habitat type +rainfall, data= my_data]

How does forest loss affect the density of *Propithecus edwardsi* through time?

Mechanistic question



States :

F= Forest

L= Lemurs

Processes:

r= natural regeneration rate

μ= natural forest loss rate

α= degeneration rate

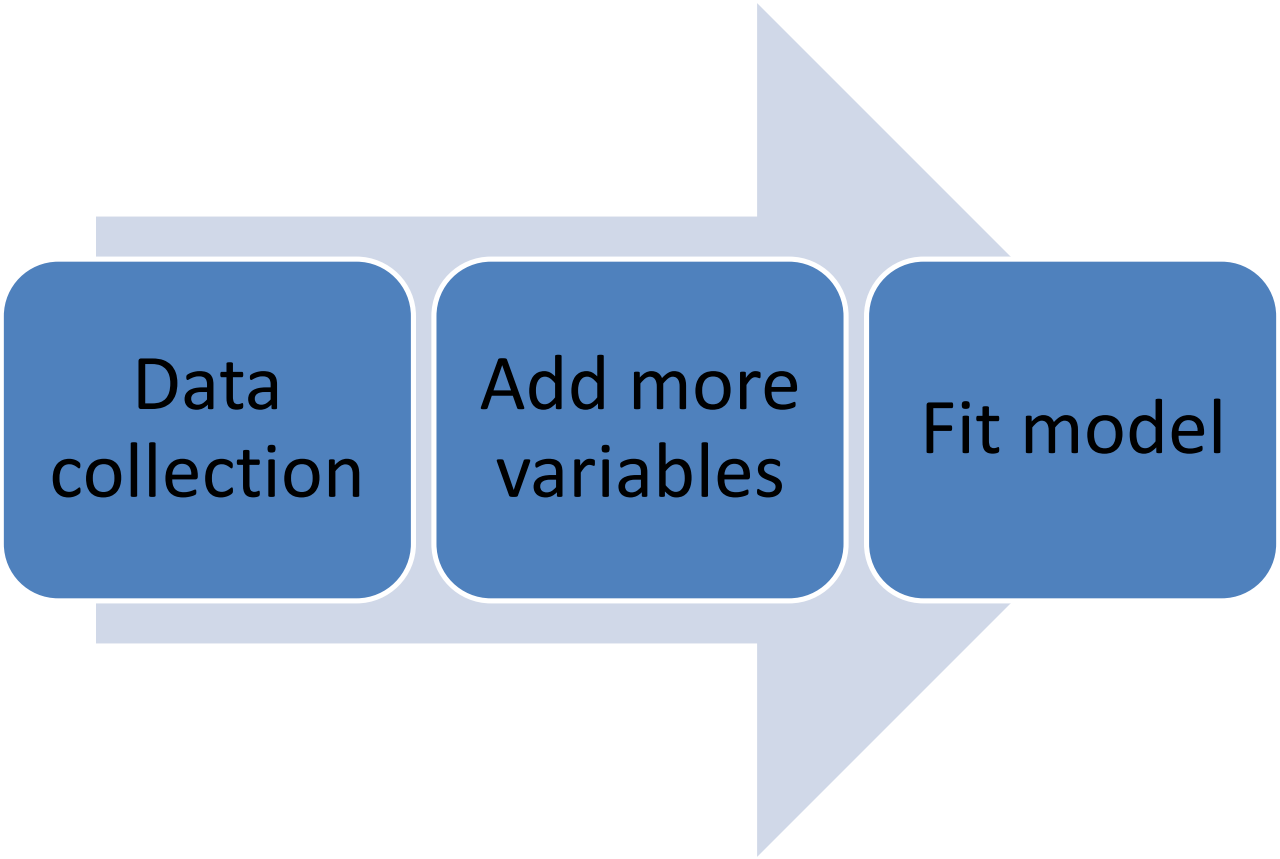
b= lemur's birth rate

d= lemur's death rate

$$\frac{dF}{dt} = rF - \mu F - \alpha F$$

$$\frac{dL}{dt} = bL - dL$$

Future directions



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