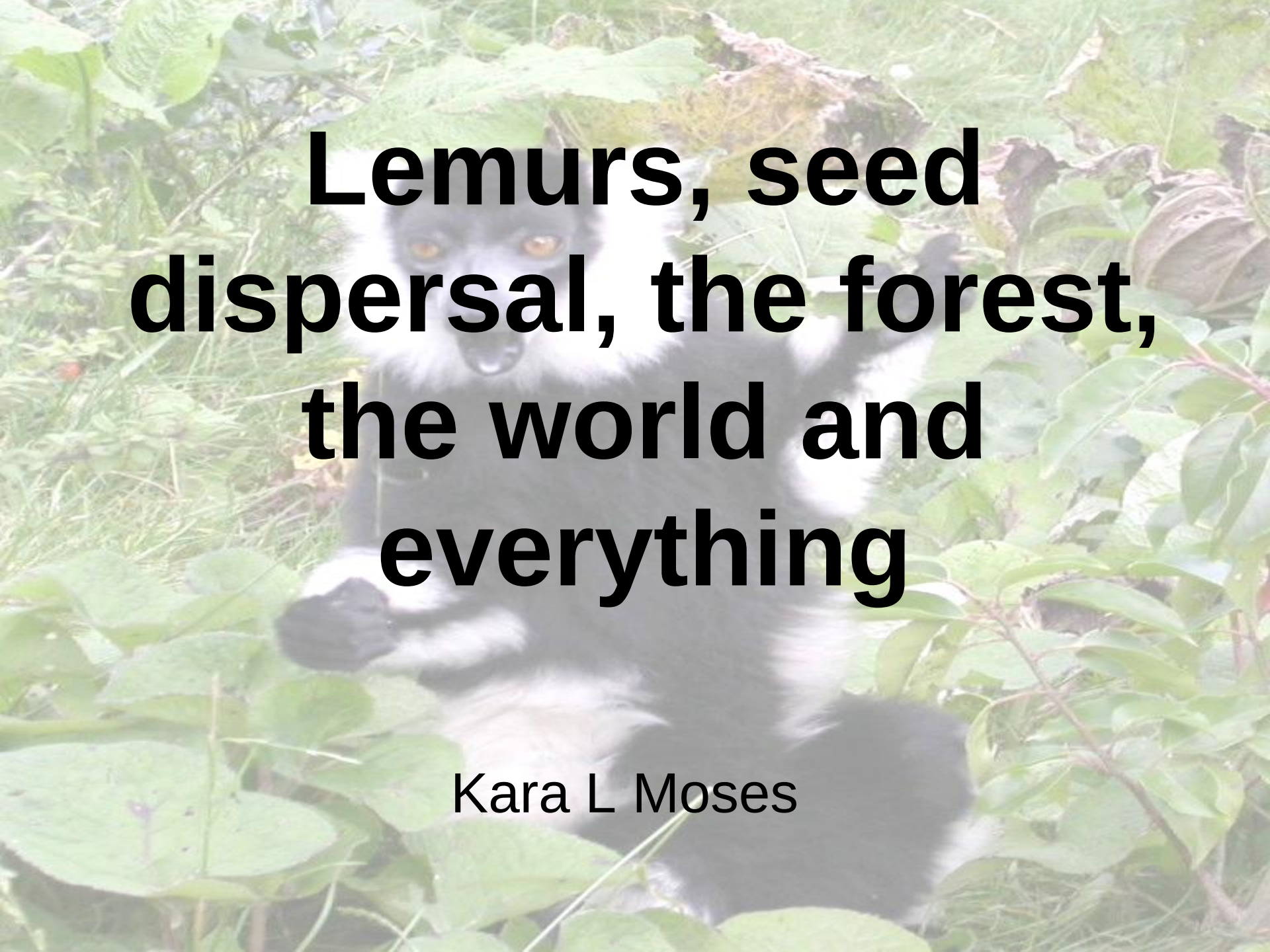

Lemurs, seed dispersal, the forest, the world and everything

Kara L Moses

Background - Seed dispersal

- Essential for the regeneration of plants
- Most tropical tree species produce fruits adapted for consumption by frugivorous vertebrates
- Primates are known to be important dispersers of seeds
- Relatively little research on lemurs





Varecia sp.

- Preliminary data: *V. variegata* is an important seed disperser, particularly large seeds (Dew & Wright 1998). But v. small sample
- Physical, behavioural, ecological attributes lend themselves to seed dispersal
- Largest Madagascar frugivore – largest gape
- Most frugivorous lemur
- Seeds passed intact
- Loose fecal clumps, broken further by falling from canopy
- Ranging behaviour

Objectives

- How many seeds, of how many species, dispersed
- Characteristics of droppings and the seeds within them
- How far seeds dispersed from parent plants
- Effects of gut passage on germination

Study Site – Manombo, SE Madagascar

G.E. Schatz 1995


Madagascar, Nov 2009 N102-2975 © Daniel Austin


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Madagascar, Nov 2009 N102-2998 © Daniel Austin


0 CM
1
2
3
4
5
6
7
8
9
10
11
12
13
14

1

Mimusops sp
Nato

2

Mendoncia cowanii

3

Sideroxylon sp
Ambiladitra

4

Gambeya madagascariensis
Harongampanihy

5

Ravenala madagascariensis
Ravinala

6

Lantana camara
Radriaka

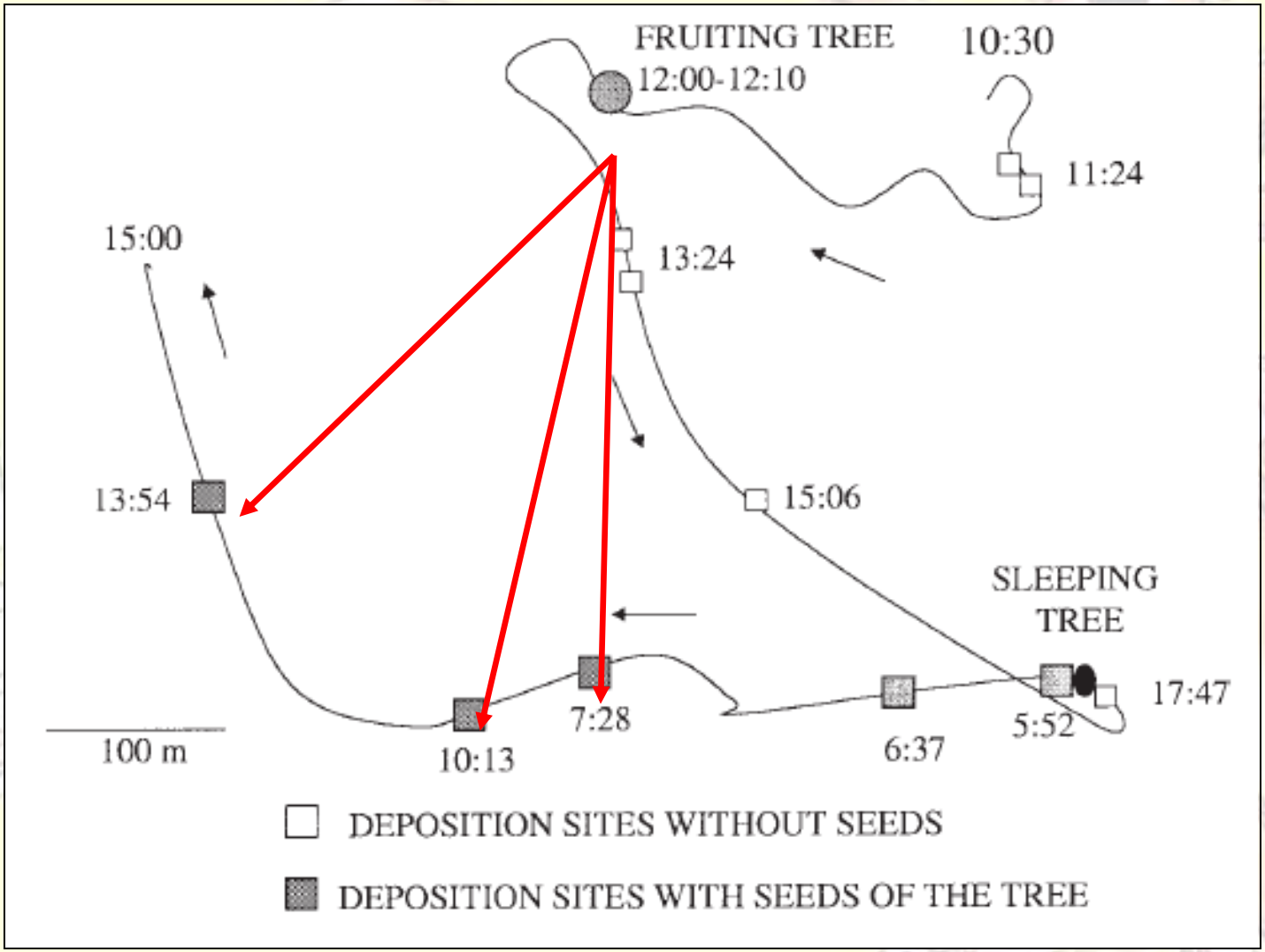
7

Aframomum angustifolium
Longoza

8

~~Sp 8~~
Grewia sp.
Hafotra

Dispersal Distance



(Stevenson, 2000)

Dispersal quantity

 # seeds/day/lemur =

avg # seeds/deposition x # depositions/day/lemur

 # seeds/km2/day =

(avg # seeds/deposition x # depositions/day/lemur)

x individuals/km2


Liceo


freetime
Nikon


MILK CHOCOLATE
ADVENT CALENDAR
25 festive milk chocolate shapes
Disney
ONE-MONTH
FOREST-SURVIVAL
RATION PACK
GLUTEN-FREE
SMOKER'S VERSION
Crimble's
Crimble's
Crimble's
Crimble's
MAGNERS
gluten free
PINK PANTHER
a little bit of...
Mars
medium size bars
Mars
Mars
DAIRY MILK


2009
Selma

Dispersal quantity

- Individuals: 104 seeds/day
  37,969 seeds/year

- Population: 151 seeds/day/km2
  55,115 seeds/year/km2

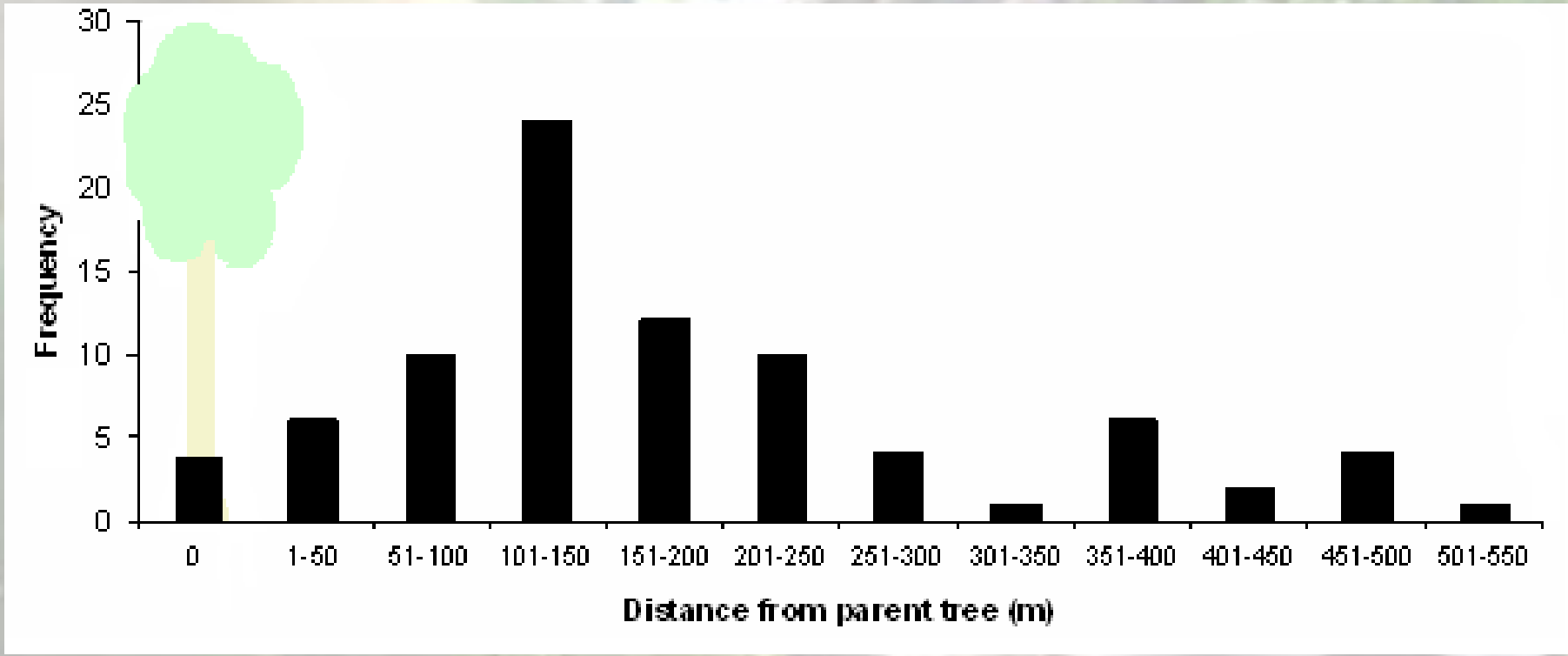
Characteristics of droppings

- Very loosely held together
- 70% contained seeds
- 99.9% intact and undamaged
- 11.6 seeds/deposition
- 1.2 species/deposition

Characteristics of seeds

- Average size: 14mm
- Most were ‘large’
- Largest 42 mm
- Most common (16% of all seeds) *Chrysophyllum perrieri*

Dispersal distance



Conclusions

- Effective disperser, and particularly important for large seeds, at least at this study site and at this time of year
- Potentially critical for largest seeded species
- Important role in maintaining forest structure and dynamics
- Implications for global climate??


Thank you!