Frugivory and seed dispersal patterns of black-and-white ruffed lemurs in the fragmented forest of the Complexe Torotofotsy-Ihofa in eastern Madagascar

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INTRODUCTION

**Frugivorous vertebrates :

Shape forest tree community structure through seed dispersal

-> Help in the regeneration of disturbed habitats

**_Varecia variegata_ :

Class: Mammalia

Order: Primate

Family: Lemuridae

Genus: *Varecia*

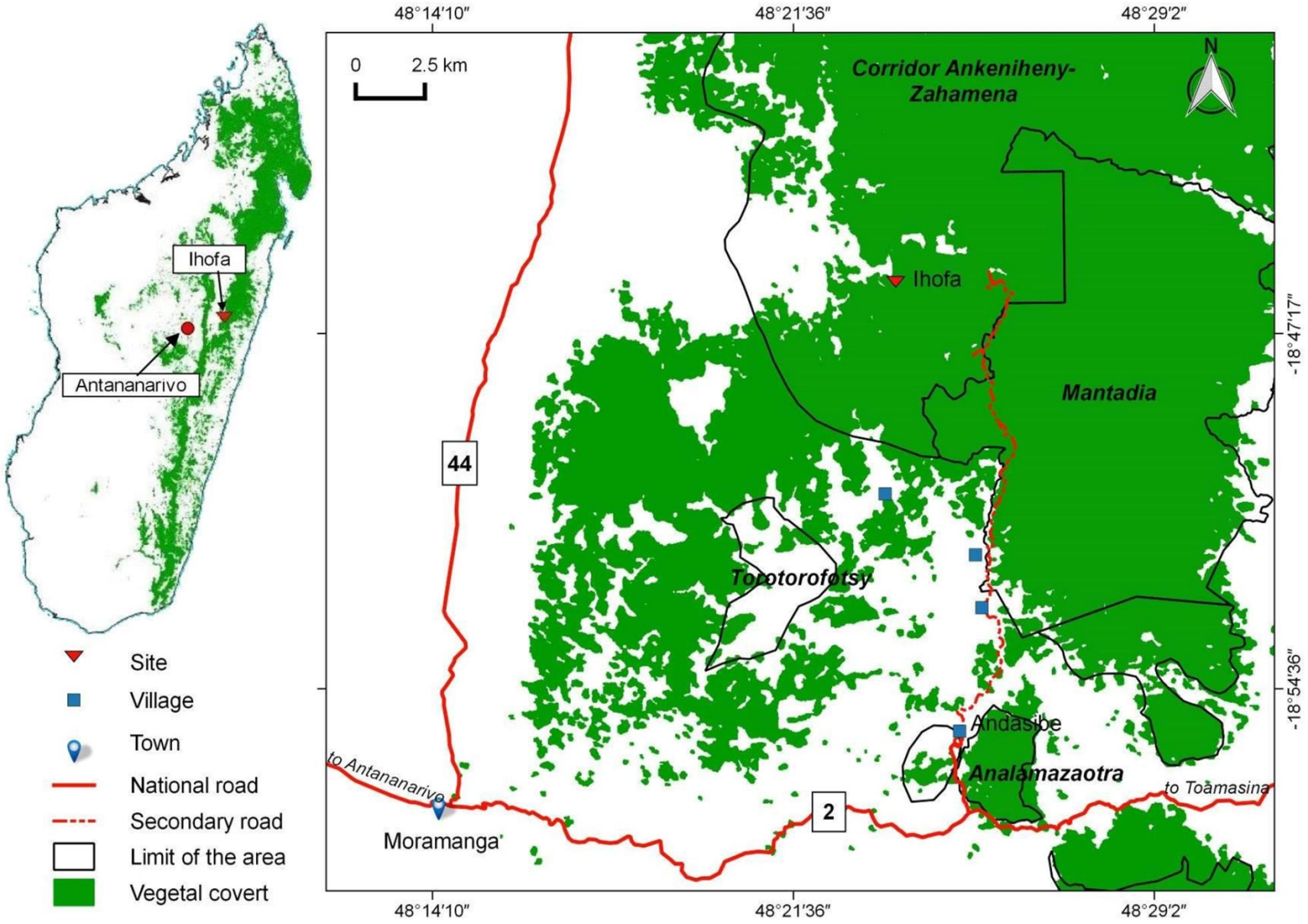
Species: *Varecia variegata*

Frugivorous lemur in the Eastern part of Madagascar

IUCN statute: CR

Objective: Assessing the potential role of black-and-white ruffed lemurs (*Varecia variegata*) in gap regeneration

Study site

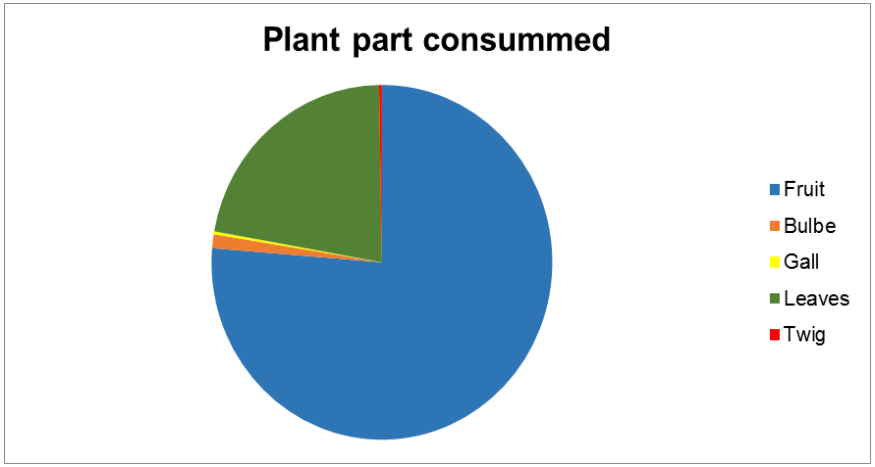

48°14'10"
48°21'36"
48°29'2"
0
2.5 km
N
Corridor Ankeniheny-
Zahamena
Ihofa
Mantadia
-18°47'17"
44
Toamasina
-18°54'36"
Andasibe
Analamazaotra
to Toamasina
to Antananarivo
2
Moramanga
Ihofa
Antananarivo
Site
Village
Town
National road
Secondary road
Limit of the area
Vegetal covert

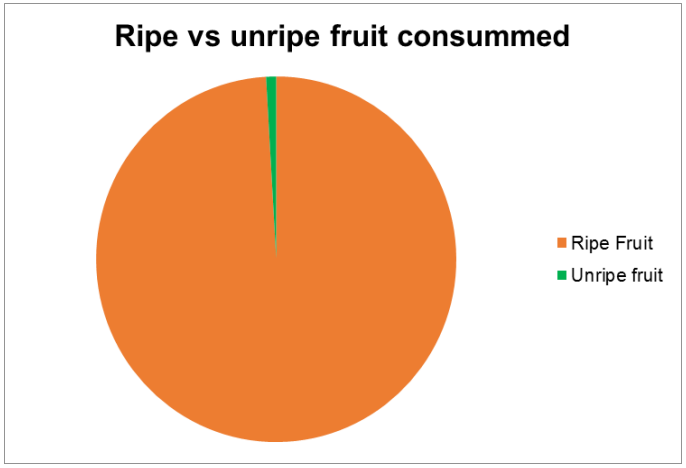
METHODS

1. Monitoring of 3 groups of *Varecia variegata* for 3 months
2. Direct observations of feeding and dispersal events
3. Assessment of microhabitats in which seeds were deposited

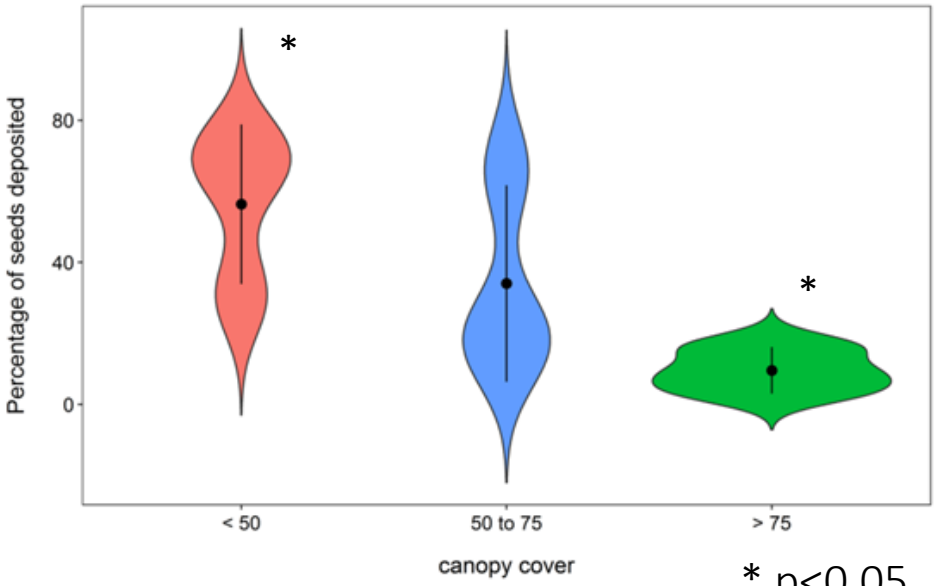
RESULTS

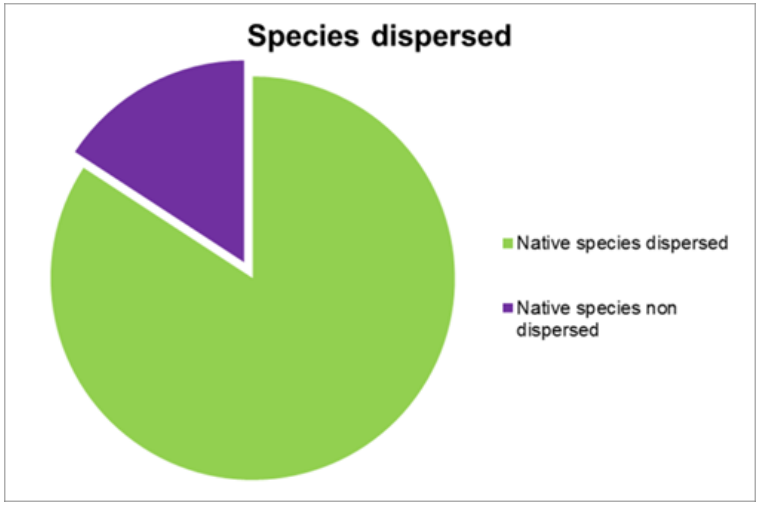
Fruit species consumed	Dispersed
Abrahamia ditimena	yes
Aphloia theiformis	yes
Canarium sp.	yes
Craspidospermum verticillatum	yes
Cryptocarya sp.	yes
Danais sp.	yes
Dicoryphe stipulacea	yes
Dombeya biumbellata	yes
Eugenia sp.	yes
Grewia apetala	yes
Labramia louvelii	yes
Pandanus purpurascens	no
Podocarpus madagascariensis	no
Potameia sp.	yes
Symphonia tanalensis	yes
Syzygium emirnense	yes
Tannodia perrieri	no
Thecacoris cometia	yes
Tinopsis sp.	yes





RESULTS





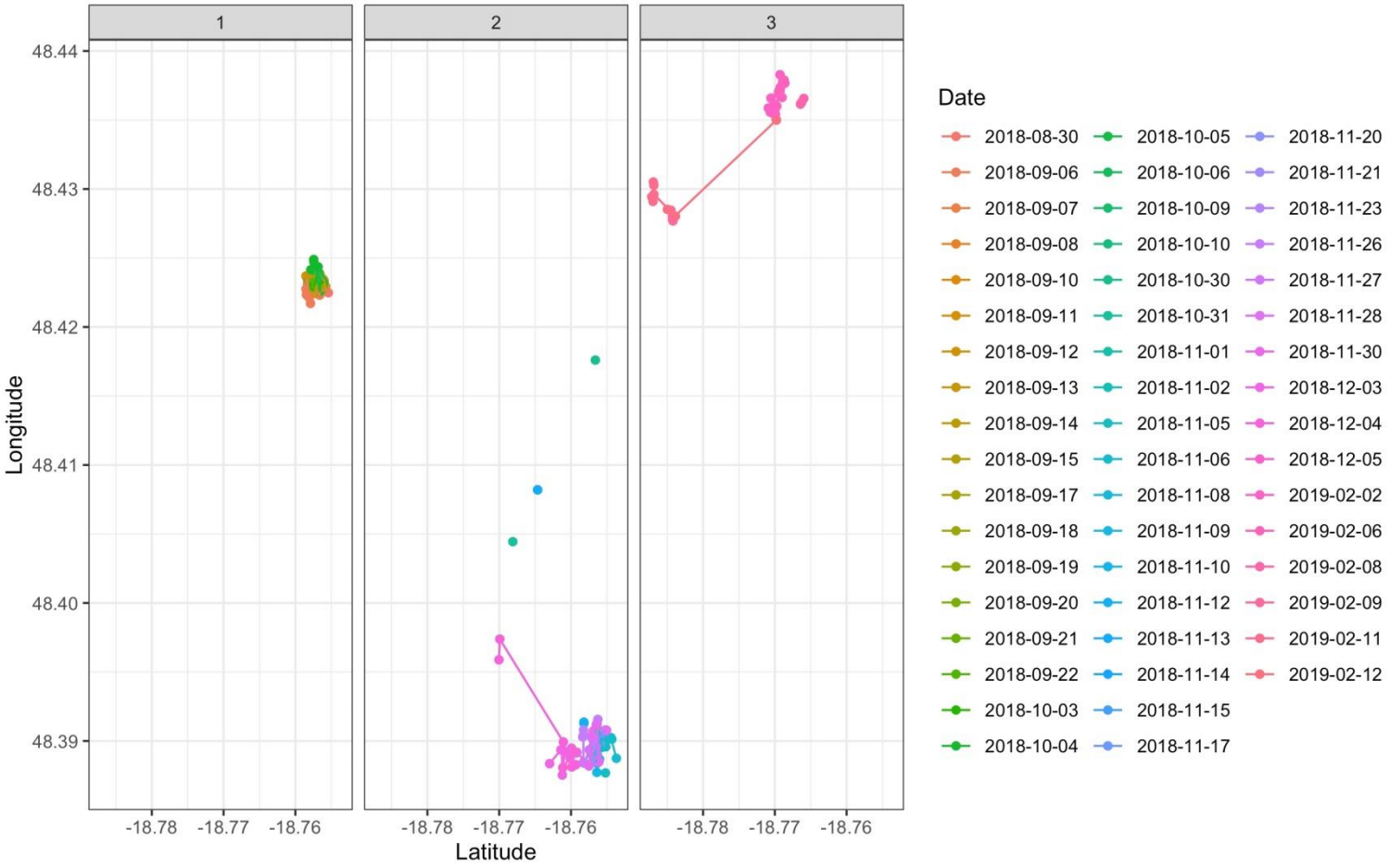
* $p<0.05$

More seeds were deposited under open canopy habitats

84% of the native plant species consumed are dispersed

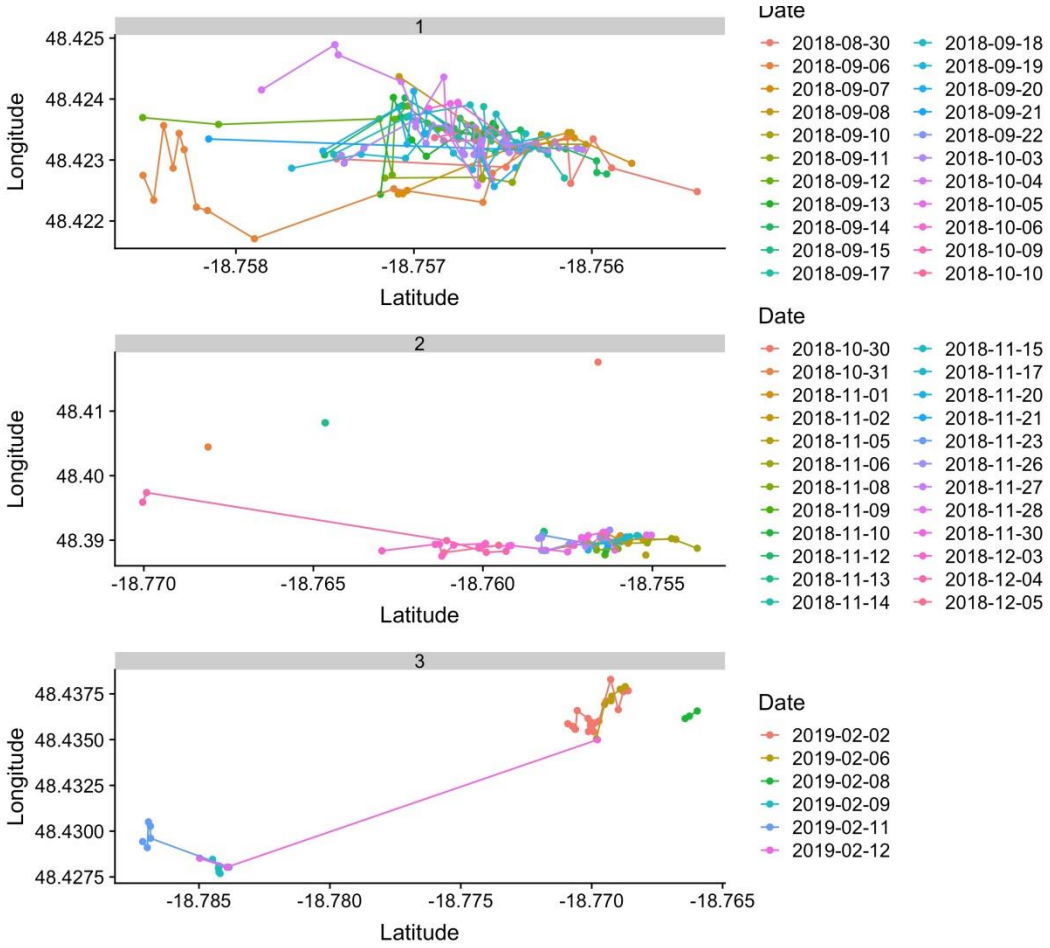
RESULTS

Patterns of movement of *Varecia variegata*, side by side view



RESULTS

Patterns of movement of *Varecia variegata*, narrow_range view



CONCLUSION

- *Varecia variegata* play an important role in the regeneration of disturbed habitats and an help in gap regeneration
- By dispersing mostly native plants, *V. variegata* may help maintain plant diversity

Next step:

ACKNOWLEDGEMENTS

- Dr. Peter Long, Depart. of Zoology, University of Oxford

- Dr. Verohanitra Rafidison, Depart. of Plant Biology and Ecology, University of Antananarivo

- Nancia Raoelinjanakolona, Depart. of Animal Biology, University of Antananarivo

- Angelo Andrianiaina, Depart. of Animal Biology, University of Antananarivo
- E2M2 team

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