



Tachycnemis seychellensis
Photo: L. McLaughlin



Monitoring geckos in the Vallée de Mai: A herpetofauna hotspot

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Phelsuma astriata Photo: R. Duborget

Ailuronyx trachygaster Photo: L. McLaughlin

Herpetofauna of the Vallée de Mai

- What is herpetofauna?

“reptiles and amphibians of a particular region, habitat or geological period”

- Vallée de Mai is a well known hotspot – hosts 17 of the 27 endemic species

- 6 geckos
- 3 skinks
- 2 chameleons
- 2 frogs
- 2 caecilians
- 2 snakes



Archaius scychellensis Photo: R. Duborget

What are we studying? – 3 bronze geckos



Dwarf bronze gecko
Ailuronyx tachyscopeaus



Bronze-eyed gecko *Ailuronyx seychellensis*



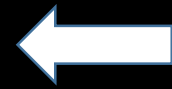
Giant bronze gecko
Ailuronyx trachygaster

All photo credits: R. Duborget

What are we studying? – 2 day geckos



Photo: L. McLaughlin



Seychelles day gecko
Phelsuma astriata



Sundbergi's day gecko
Phelsuma sundbergi



Photo: R. Duborget

What are we studying? – 2 chameleons



Seychelles chameleon *Archaius scychellensis*



Tiger chameleon *Archaius tigris*

What are we studying? – 1 tree frog



Seychelles tree frog *Tachycnemis seychellensis*

Photo: R. Duborget

Why are we studying them?

- Limited information on ecology and population status
- Assess population density
- Monitor population trends over time
- Impact of yellow crazy ants
- Impact of environmental features on herpetofauna distribution – coco de mer forest is very important!



Ailuronyx tachyscopeus Photo: R. Duborget

Why are we studying them?

- Noticeable recent decline in populations
 - Impacts from invasive species
 - Poaching for the exotic pet trade
- Urgent need for protection - not found anywhere else in the world!
Once gone, they are gone forever



Phelsuma sundbergi Photo: R. Duborget

Past studies

- Several Masters and a PhD thesis completed on different species
- This year is 2nd survey to be completed, 1st in 2017
- The number of individuals seen in 1st survey were too few to analyse data
- Recommendations included covering a larger area and surveying in wet season

How do we survey them?

- Distance sampling method
 - 50 m transects set up
 - Vallée de Mai, Fond Pepper and Fond Ferdinand covered
 - Transects walked in am and pm
 - Record all geckos, chameleons and tree frogs seen
 - Trialled night surveys
- Use distance analysis to estimate population size



Line set up in Fond Pepper

Photo: K. Collins



Surveying in Fond Ferdinand

Photo: M. Griffith



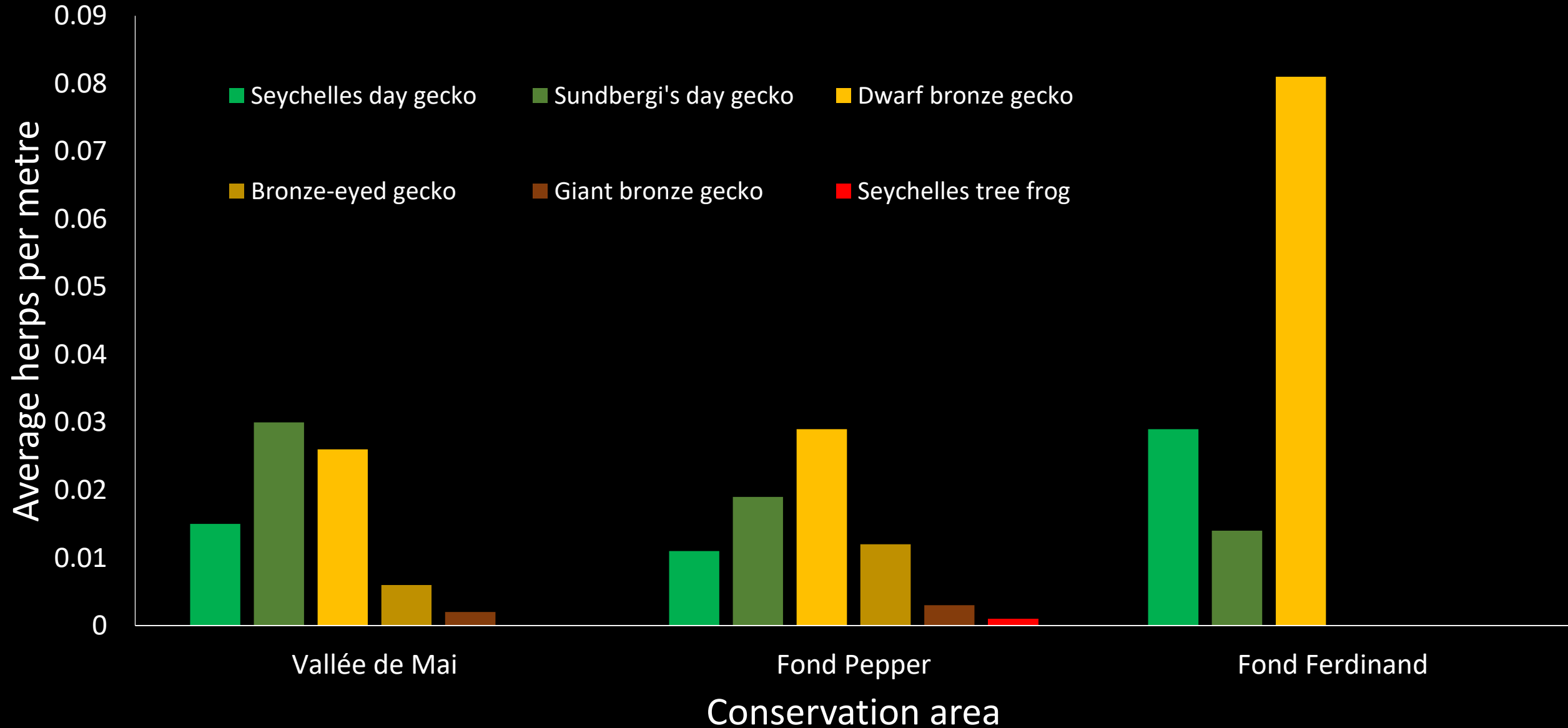
Results so far:

- Hard to survey!
 - Incredibly cryptic, often do not move
 - Hard to tell some species apart
 - Endemic palm forest makes it hard to see past the big palm fronds and petioles
 - Rain makes them hide
- Result is an underestimate of true numbers
- But, still important to have comparable data to show trends over time



Ailuronyx tachyscopeus Photo: R. Duborget

Average number of herpetofauna seen per transect m in three conservation areas



To the future...

- Surveys to be completed every year
- Local awareness and education about poaching
- Encouraging other organisations to monitor
- Support from the government for continued and increased protection



Ailuronyx trachygaster Photo: R. Duborget

Thank you



Phelsuma astriata Photo: R. Duborget



Tachycinema seychellensis Photo: R. Duborget



Ailuronyx tachyscopeus Photo: R. Duborget