10 years of Seychelles black parrot breeding monitoring: what we now know

Monica Griffith and Terance Payet

# Biogeography / history of the black parrot

Curieuse

Vallee de Mai, Fond Peper

Fond Ferdinand

National Park

Praslin

- Endemic to the Seychelles
  - Only breed on Praslin
  - Recorded visitor to Curieuse
- Only remaining parrot species left in Seychelles
- Previously considered a subspecies of lesser vasa parrot
  - Only declared distinct species in 2014 due to genetic research supported by SIF
    - Current population estimates: 1096 – 1742 birds

# Project aims in 2009

- Basic ecology
- Breeding behaviours
- Reproductive constraints
- Breeding activity and movements through ringing and re-sighting



# The challenge

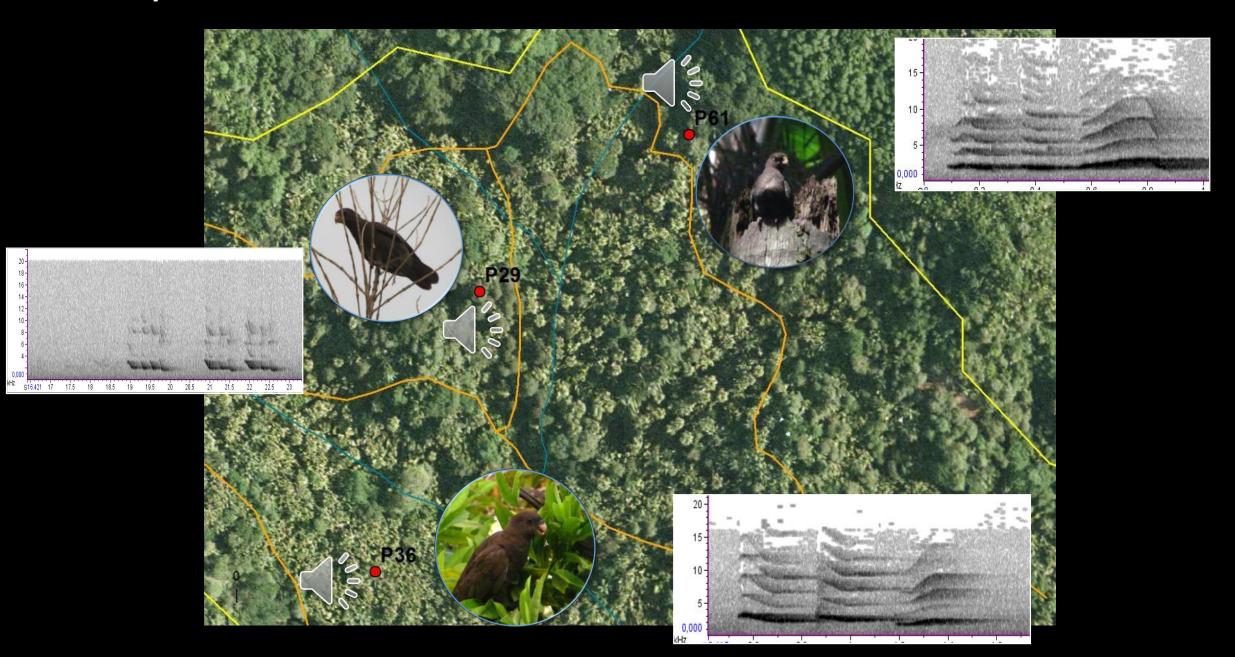
- Hard to study
- Difficult to observe can't see through coco de mer leaves
- Often nest in dead trees can't climb
- Different methods required
  - Baby monitor
  - Free standing ladders
- Time-consuming



## Major findings so far

- Each breeding female has a unique call
- Yearly fluctuations in breeding activity
- Cavity selection:
  - Predominantly in coco de mer (15/19 this year) although this could be biased
  - Entrance should be sheltered
  - Diameter of tree 25cm
  - Size of hole
  - Single entrance
  - Depth

### Black parrots - Vocalisations

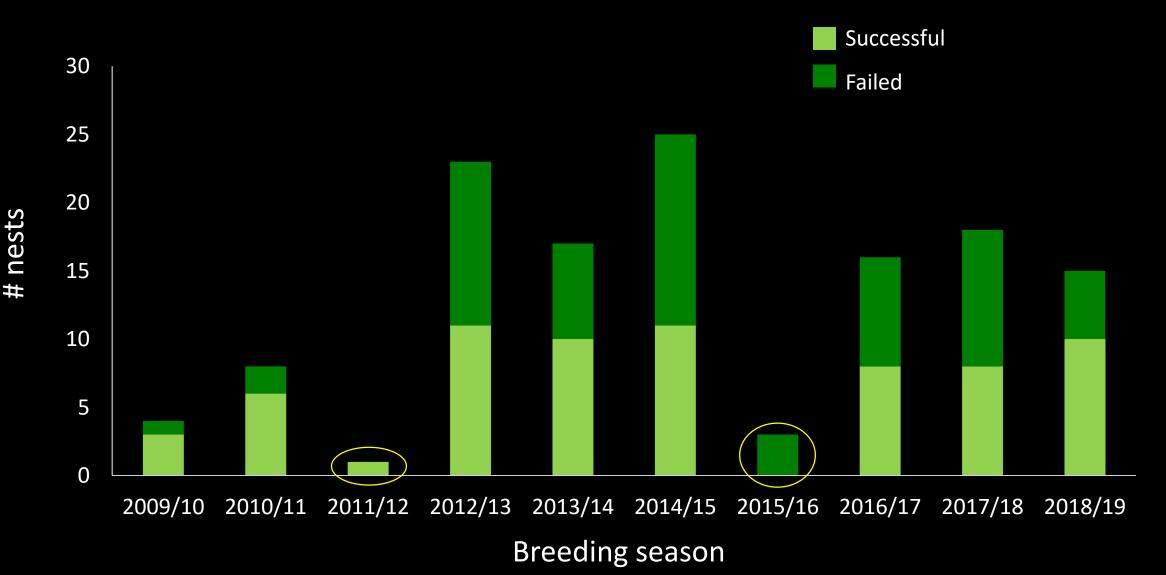


## Major findings so far

- Each breeding female has a unique call
- Yearly fluctuations in breeding activity
- Cavity selection:
  - Predominantly in coco de mer (15/19 this year) although this could be biased
  - Entrance should be sheltered
  - Diameter of tree 25cm
  - Size of hole
  - Single entrance
  - Depth

#### Black parrots – Breeding activity & nest success

Breeding activity and success 2009-2019



# Major findings so far

- Each breeding female has a unique call
- Yearly fluctuations in breeding activity
- Cavity selection:
  - Predominantly in coco de mer (15/19 this year) although this could be biased
  - Entrance should be sheltered
  - Diameter of tree 25cm
  - Size of hole
  - Depth
  - Single entrance



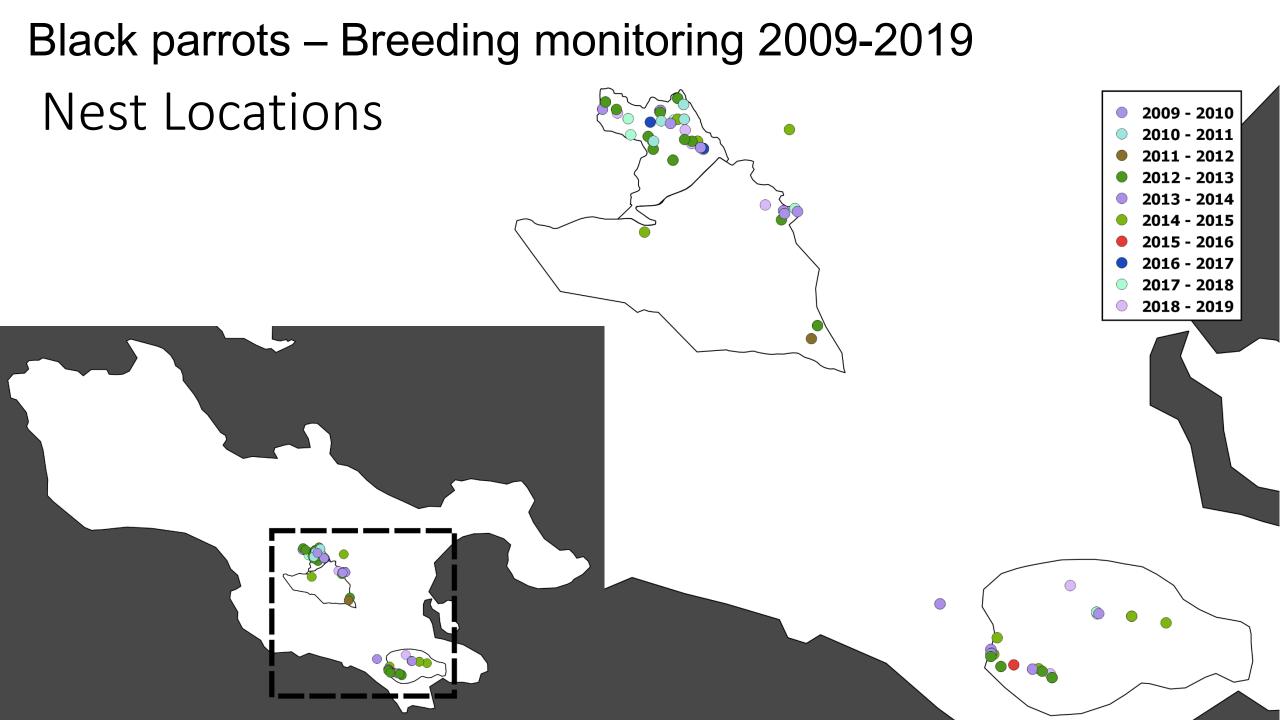


### Black parrots – Breeding monitoring 2009-2019

#### In numbers...

- VdM, Fond Peper, Glacis Noire, Fond Ferdinand
- 133 nest monitored
- 68 nests successful (51%)
- 93 fledglings
- 260 BPs ringed
- 90 chicks, 170 adults





#### Numbers of eggs, chicks and fledglings monitored in each breeding season 60 Total Eggs 50 # eggs / chicks / fledged Chicks Hatched Chicks Fledged 40 30 20 10 0 09/10 10/11 11/12 12/13 13/14 14/15 15/16 16/17 17/18 18/19 Season

## Breeding success

- Influencing factors:
  - Predation of eggs and chick
  - Yellow crazy ants
  - Climatic conditions / weather
  - Food availability
  - Disease
  - Genetics



## Current – rat impacts on breeding success

03-04-2019 21:

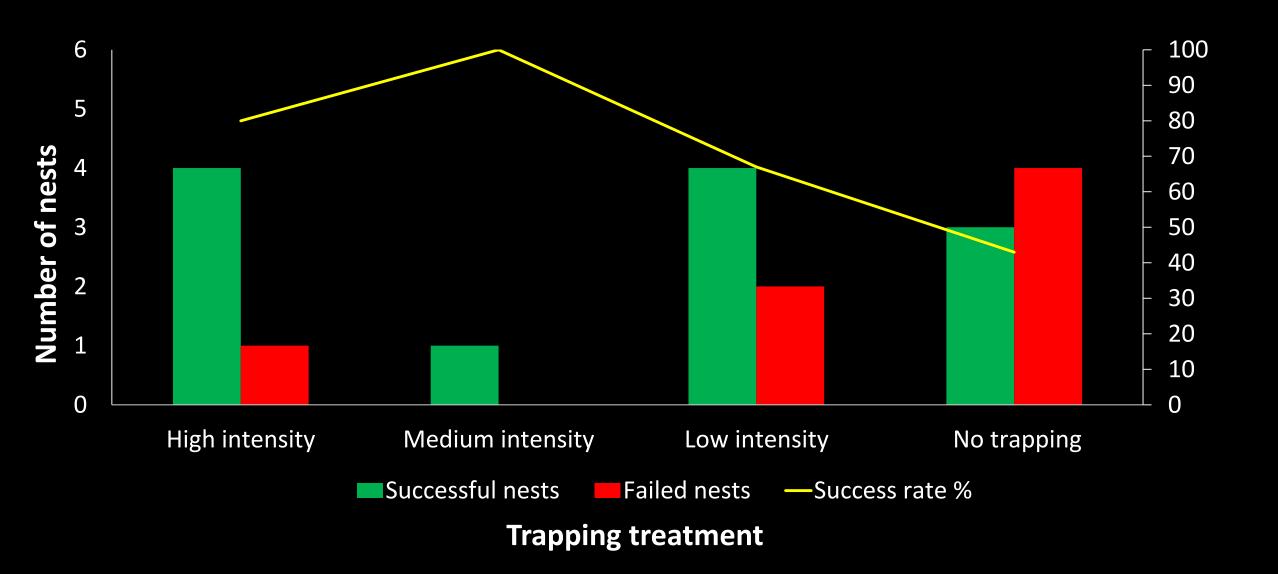
- Rats can climb trees
- Rats predate eggs/chicks
- Rats are <u>a</u> problem...
- But are they <u>the</u> problem?
- An experiment was designed to test this, and has been run for the last 2 seasons

### Rat control experiment

- Quantify impact of rats
- Treatment: 3 intensities of trapping
- Control: no trapping
- Early results suggest rats as major cause of nest failure
- But not conclusive
- Conclusion: Rats are a big problem but probably not the only problem



## Nest success during rat trapping trial



### Black parrots – What next?

#### Black parrot population - stable but vulnerable

- 1. Understand rat impacts assess rat control experiment, continue trial?
- 2. Understand causes of fluctuating breeding activity phenology review, continue breeding monitoring
- **3.** Improve conservation status of BPs reduce threats at VdM, e.g. YCA control, support translocations to suitable islands
- 4. Understand black parrot breeding ecology more research into cooperative breeding, genetics, post-fledging survival
- 5. Publication of 10 years of data

Thanks to everyone who has contributed to the Black Parrot project over the last 10 years

Charles of aniton

seychelles islands fou