

## Reptile conservation in Mauritius: Restoring island biodiversity



## Reptile conservation in Mauritius: Island Biodiversity & Extinction

- The island of Mauritius is a species diversity island
- naturally rich in island endemics and habitat
- extinction of all available resources
- The need for reptile conservation and translocation
- The biodiversity conservation committee for mammals of unique
- Since the 17th Century 75% of all animal extinctions
- have been for Mauritian reptiles
- Islands therefore maintain some of the richest biodiversity in the World

## Island Biodiversity & Extinction

- The island of Mauritius is a species diversity island, 1400 years, with a rich biodiversity of island endemics of great
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## Mauritian reptiles

- Although the Mascarenes have lost more species than anywhere else, Mauritius still maintains one of the richest reptile diversities in the World



## Mauritian reptiles

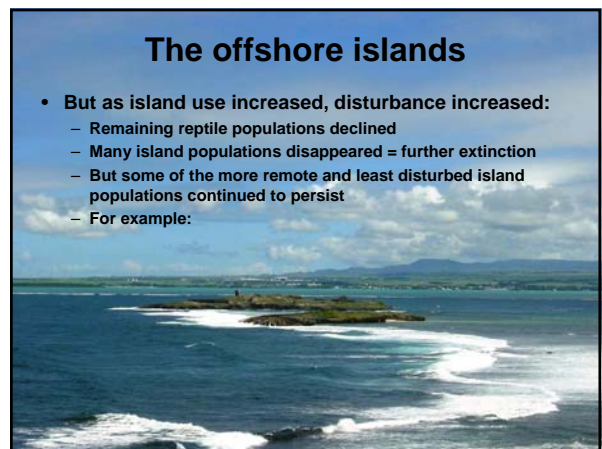
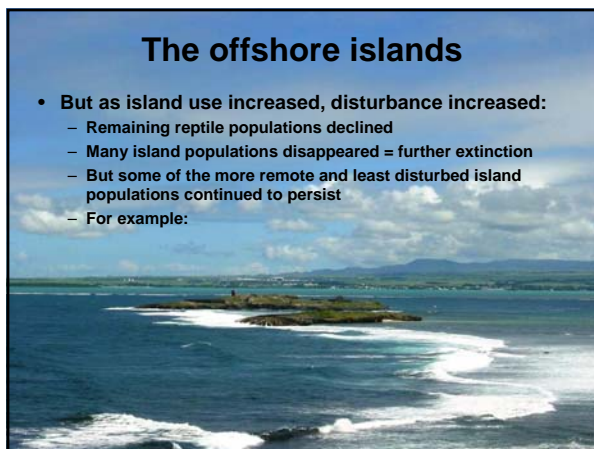
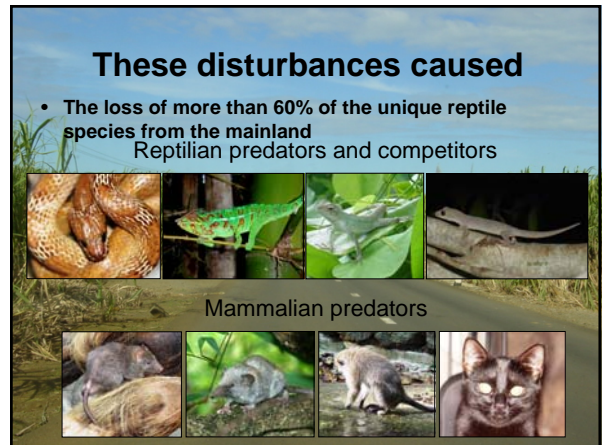
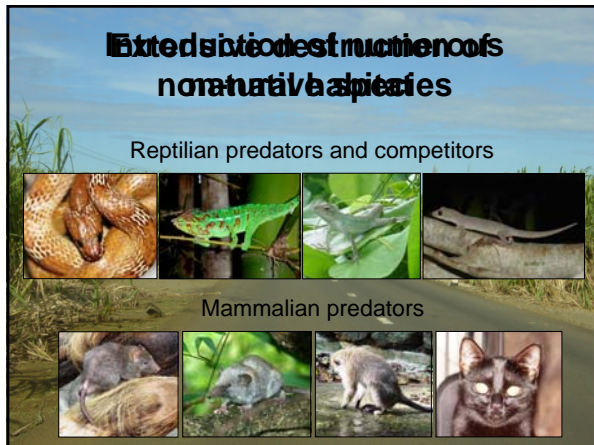
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## the formation of an ecosystem with:

- REPTILIAN BIRD BODIES AND REPTILIAN BODIES
- allowing this natural balance through browsing & grazing





## Round Island


- ~~It is the last reptile locality of other~~  
*Endemic and distinctive reptiles since 1975*




Ornate day gecko, *Phelsuma ornata*



Bojer's skink, *Gongylomorphus bojerii*



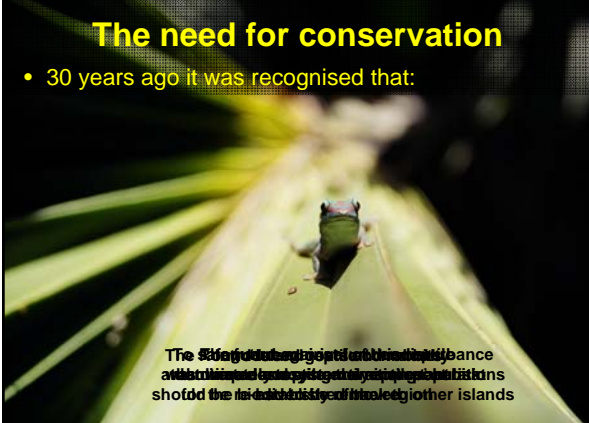
HOME TO THE LAST SEMI-INTACT  
REPTILE COMMUNITY  
WITHIN THE MASCARENES  
Bouton's skink,  
*Cryptolepharus boutonii*



Bullock & North 1975

## The need for conservation


- 30 years ago it was recognised that:



The ~~30 years ago it was recognised that~~  
ability to ~~re-establish a population~~  
should be ~~the main priority~~ of other islands

## The need for conservation

- ~~Most of the population were known to be~~



There ~~reptiles' additional requirements~~  
remove and re-establish elsewhere

## The need for conservation

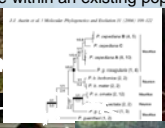
- ~~It had been established that the~~  
~~30 years ago it was recognised that~~  
health and disease, and past and present distributions  
= **TRANSLOCATION**  
= Some islands now suitable for reptile re-establishment




## The need for conservation

- ~~The movement of a species from one location to another~~  
from those who was suggested 30 years ago:

- Introduction: species release outside its natural range
- Re-introduction: species release within its former range
- Re-stocking: species release within an existing population

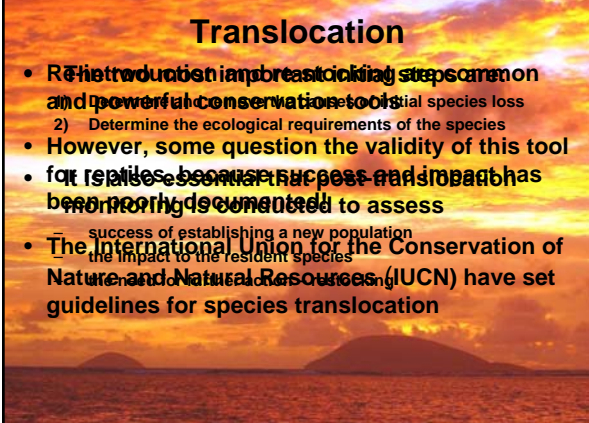


**TRANSLOCATION**



## Translocation

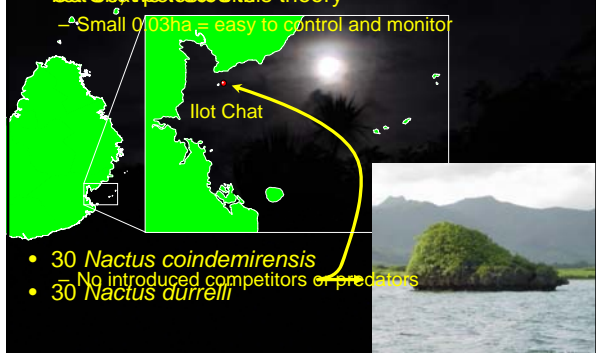
- ~~Re-introduction and restocking steps are common~~  
**and powerful conservation tools**
- ~~However, some question the validity of this tool~~
- ~~for reptiles, because success and impact has~~  
**been poorly documented**
- ~~success of establishing a new population~~  
**The International Union for the Conservation of Nature and Natural Resources (IUCN) have set guidelines for species translocation**





## Re-building reptile communities

- **Outbreaks of disease theory**
  - Small 0.03ha = easy to control and monitor



Ilot Chat

- 30 *Nactus coindemirensis*
- No introduced competitors or predators
- 30 *Nactus durrelli*

## Re-building reptile communities


- **Monitoring progress reptile was given its own component of impact assessment monitoring**



- Telfair's skinks were PIT tagged
- All others too small for tagging given photographic IDs
- Pattern of scarring, missing toes/claws, tail breaks recorded

## Re-building reptile communities

- **Baseline disease status surveyed prior to and at regular intervals after translocation**
  - Survival and recruitment



Telfair's skinks on Gurdien's Quoin

## Re-building reptile communities

- **To assess the IMPACT** the islands to:
  - Survey the resident terrestrial species prior to and during the translocation
  - During the translocation provide details from the small populations on Ilot Jacoas



## Re-building reptile communities

- To determine the adaptability and ecological role of the translocated reptiles on the recipient islands



seasonal comparisons with donor populations' utilisation of habitat and diet

## The future for Mauritian reptiles

- Is there a brighter future for Mauritian reptiles?



- Yes, as long as we can continue to protect and restore island habitats and prevent further alien introduction

## The future for Mauritian reptiles

- The impact of invasive predators with potential benefits to native reptiles and other groups
- These are the foundations to restoring island reptile communities from which we can build upon.



- Adding possibly using some as analogues for extinct species with degraded prey sources

**Reptile conservation has been a team effort involving many people  
Only with collaboration can we continue to restore these unique communities  
Thank you!**