

National Forest Demarcation and Bio-Physical Resource Inventory Project

Biological Inventory



Matt Morton FCG International / Durrell Wildlife Conservation Trust

Biodiversity Surveys 2009



Reptiles & Amphibians



Mammals



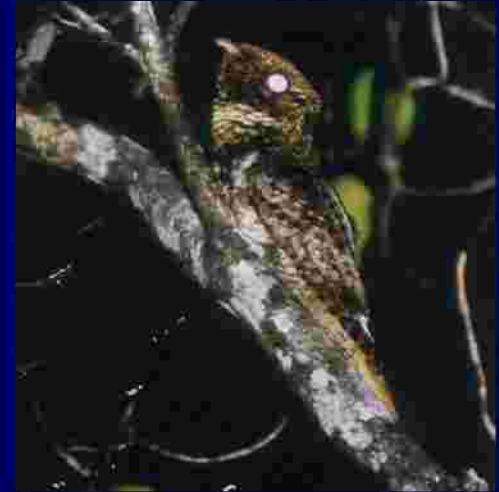
Insects



Birds



Plants



Critical Species

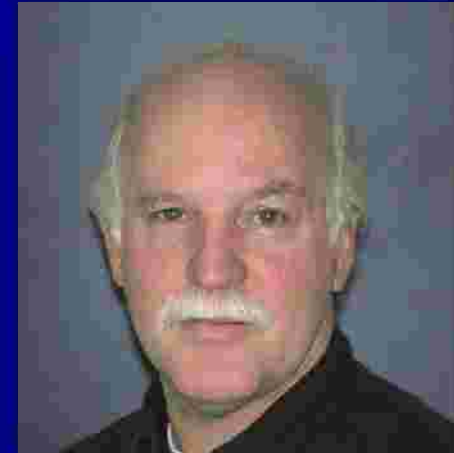
Biodiversity Surveys 2009



Dr Jenny Daltry
Reptiles & Amphibians



Dr Frank Clarke
Mammals



Prof Mike Ivie
Insects



Mr Adams Toussaint
Birds



Mr Roger Graveson
Plants



Mr Matthew Morton
Critical Species

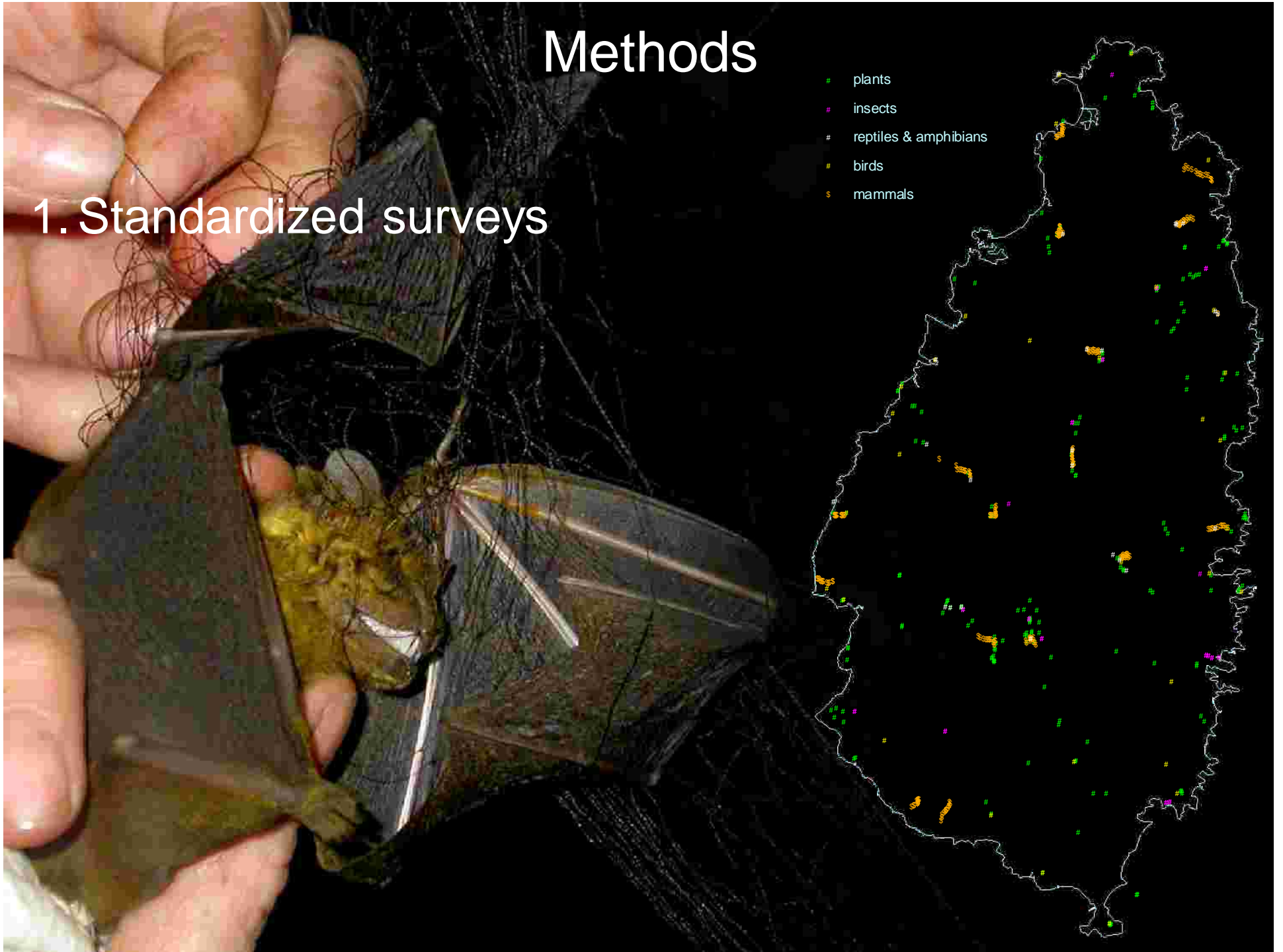


Aims

1. A classification and map of forest types nationwide.
2. A 'biodiversity inventory' and species distributions.
3. Priority species and forest areas.
4. Assessment of wildlife use.
5. Recommended management actions.
6. Upgrade the herbarium
7. Training on research methods.

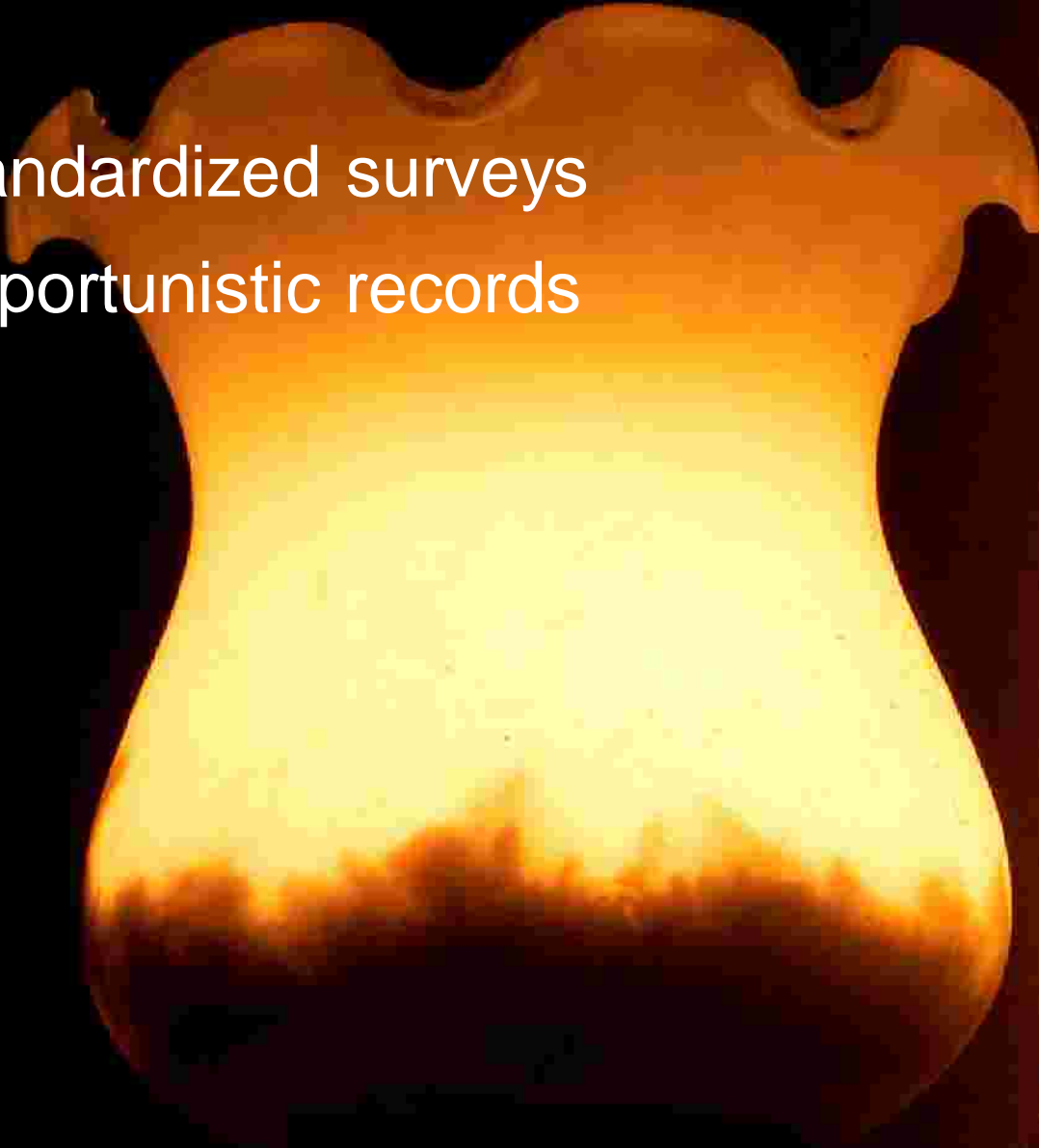
Methods

1. Standardized surveys



Methods

1. Standardized surveys
2. Opportunistic records



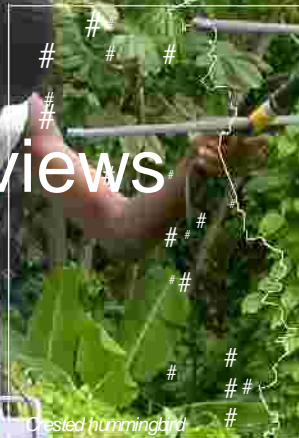
Methods

1. Standardized surveys
2. Opportunistic records
3. Questionnaires and interviews



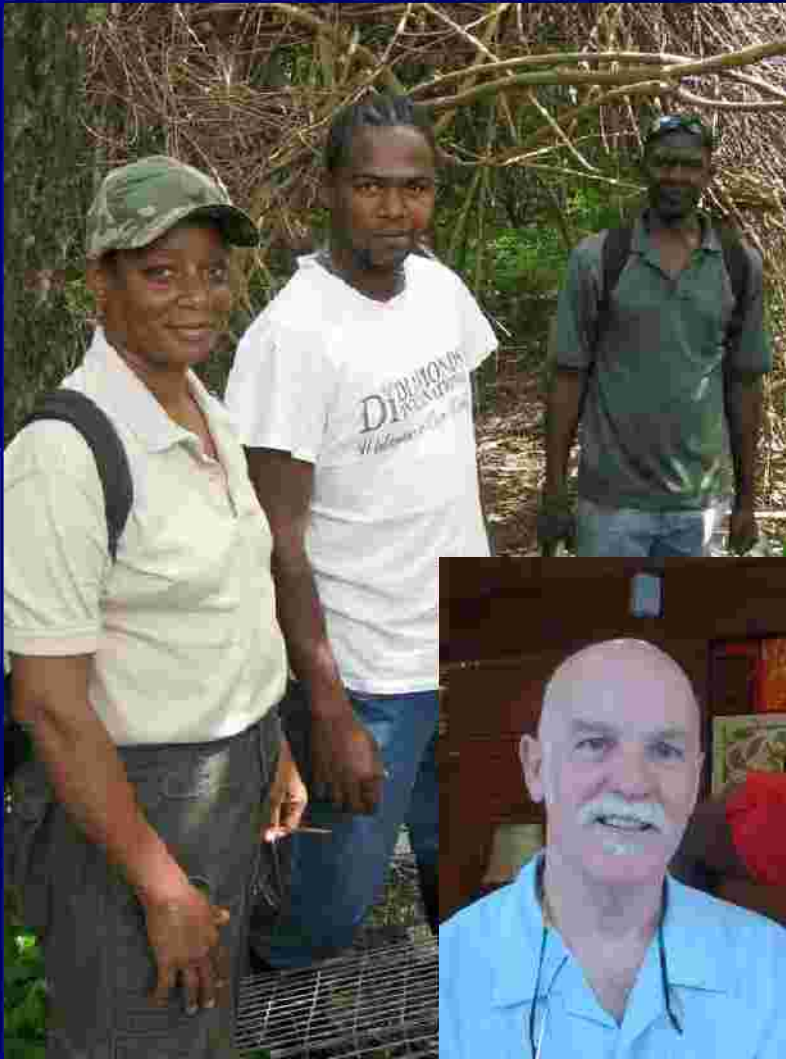
Methods

1. Standardized surveys
2. Opportunistic records
3. Literature searches
4. Questionnaires and interviews
5. Auxiliary data



Outputs

1. Staff trained on research methods



Outputs

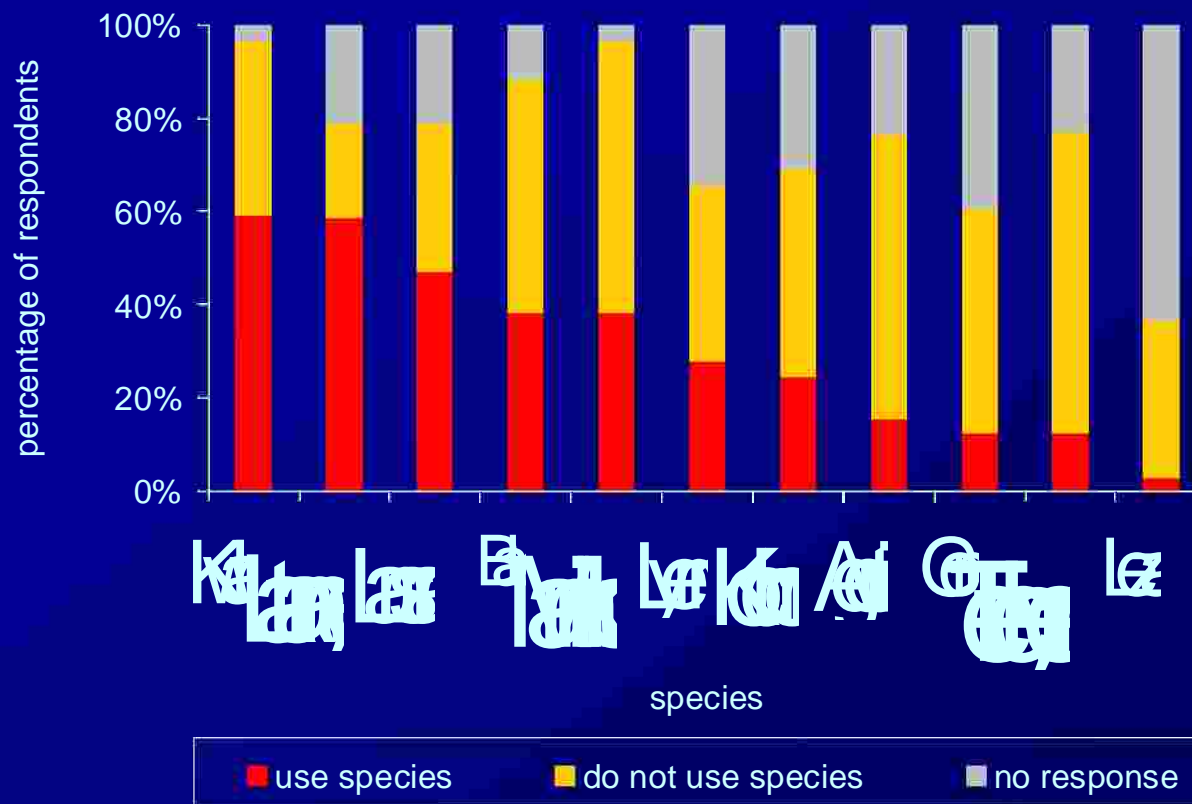
2. Herbarium upgraded



Outputs

3. Information of how Saint Lucians use wildlife

Over 200 people interviewed



Outputs

4. Forest Classification and Map

17 vegetation types defined and mapped

Natural Forest

Littoral Evergreen Forest and Shrubland
Mangrove
Freshwater Swamp Forest
Deciduous Seasonal Forest

Semi-evergreen Seasonal Forest
Lower Montane Rainforest
Montane Rainforest
Cloud Montane Rainforest

Semi-natural Forest

Tree Plantations

Non-Forest

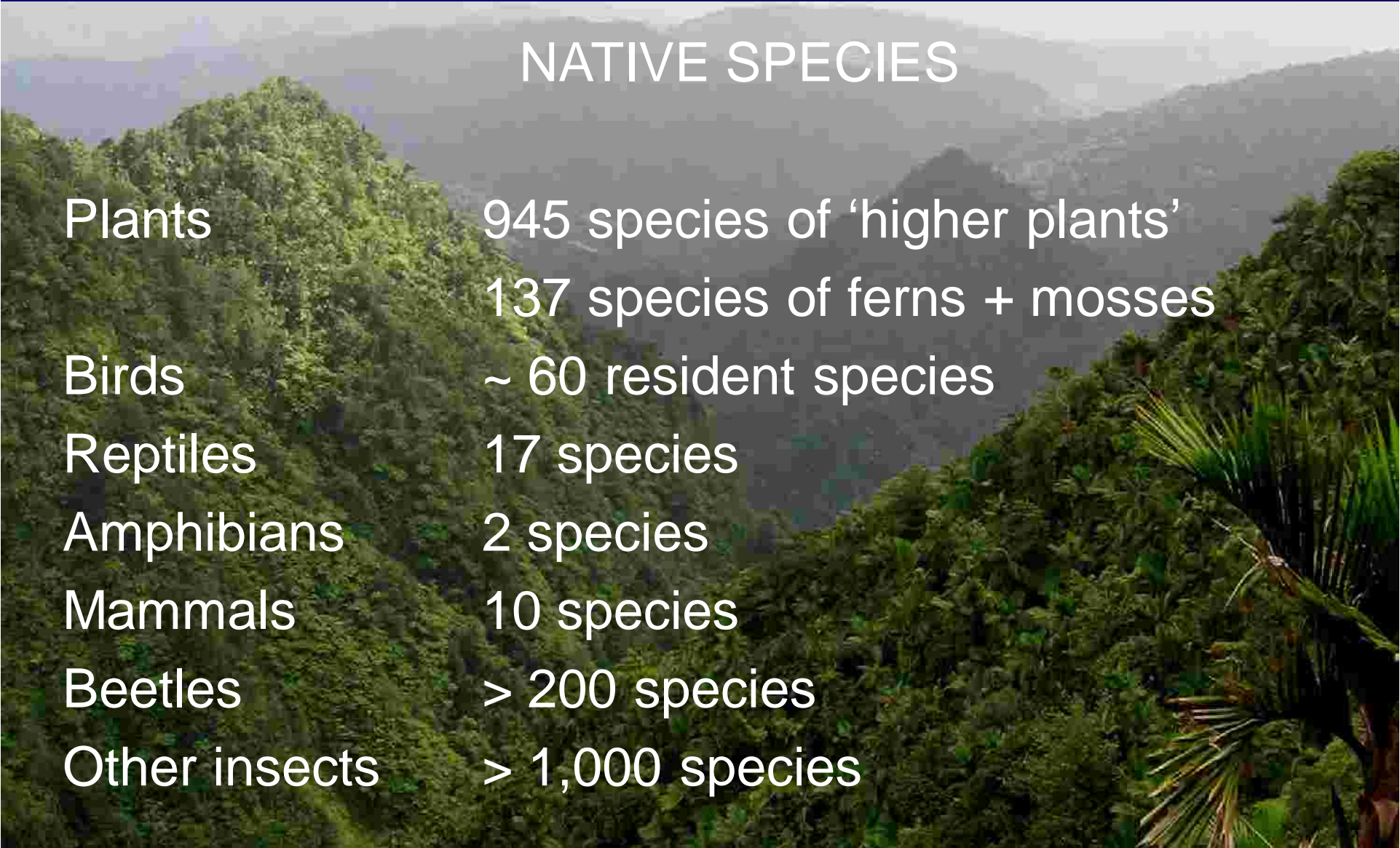
Elfin Shrublands
Herbaceous Swamp
Aquatic Herbaceous Vegetation
Littoral Rock and Cliff Vegetation

Littoral Unconsolidated Sand Vegetation
Littoral Scrub, including Cacti
Fumarole Vegetation
Grassland, with or without trees or shrubs

Outputs

5. Inventory: Saint Lucia's biodiversity

NATIVE SPECIES



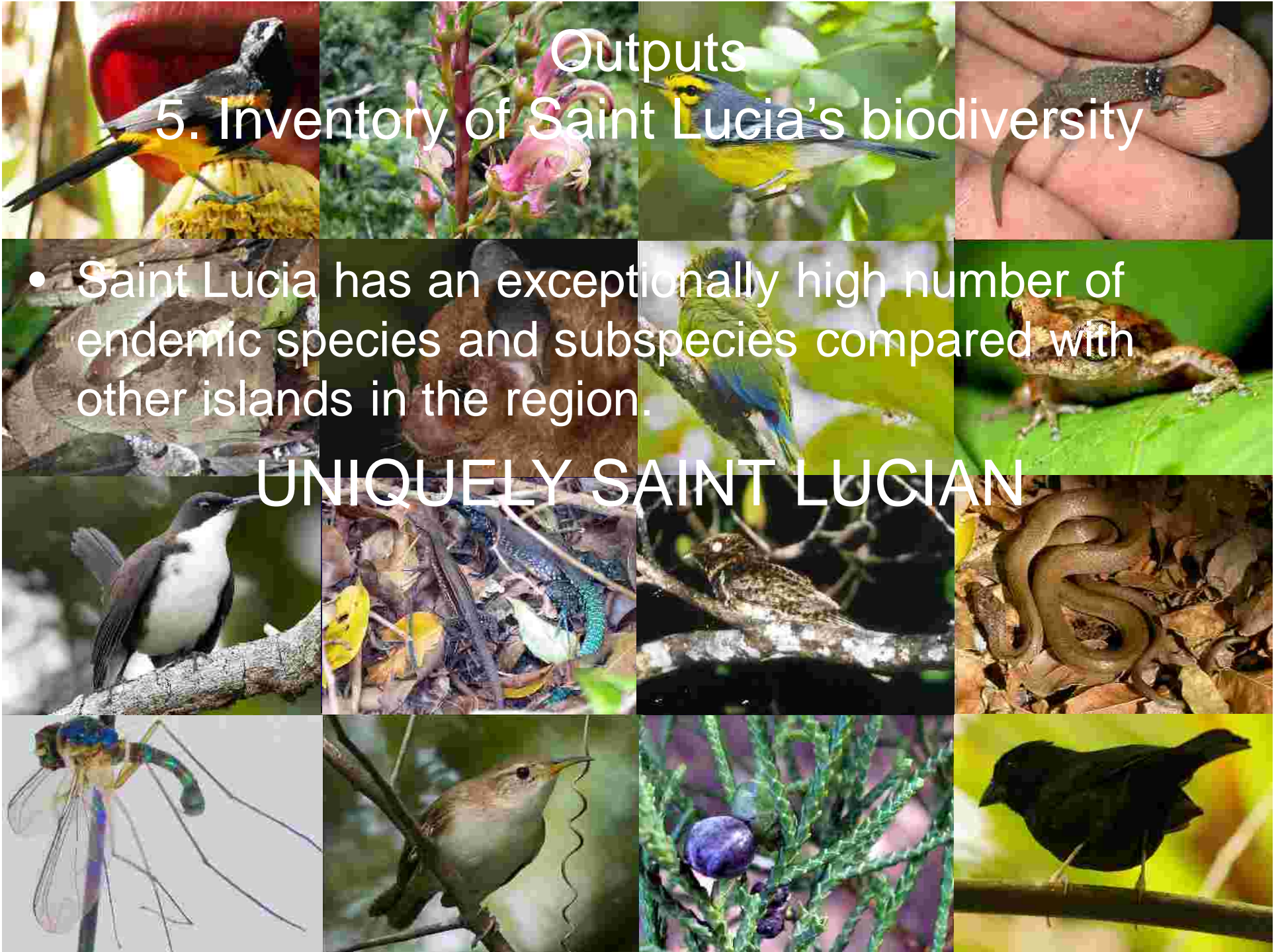
Plants	945 species of 'higher plants' 137 species of ferns + mosses
Birds	~ 60 resident species
Reptiles	17 species
Amphibians	2 species
Mammals	10 species
Beetles	> 200 species
Other insects	> 1,000 species

Outputs

5. Inventory of Saint Lucia's biodiversity

- Saint Lucia has an exceptionally high number of endemic species and subspecies compared with other islands in the region.

UNIQUELY SAINT LUCIAN



Outputs

5. Inventory: Saint Lucia's biodiversity



ENDEMICIS

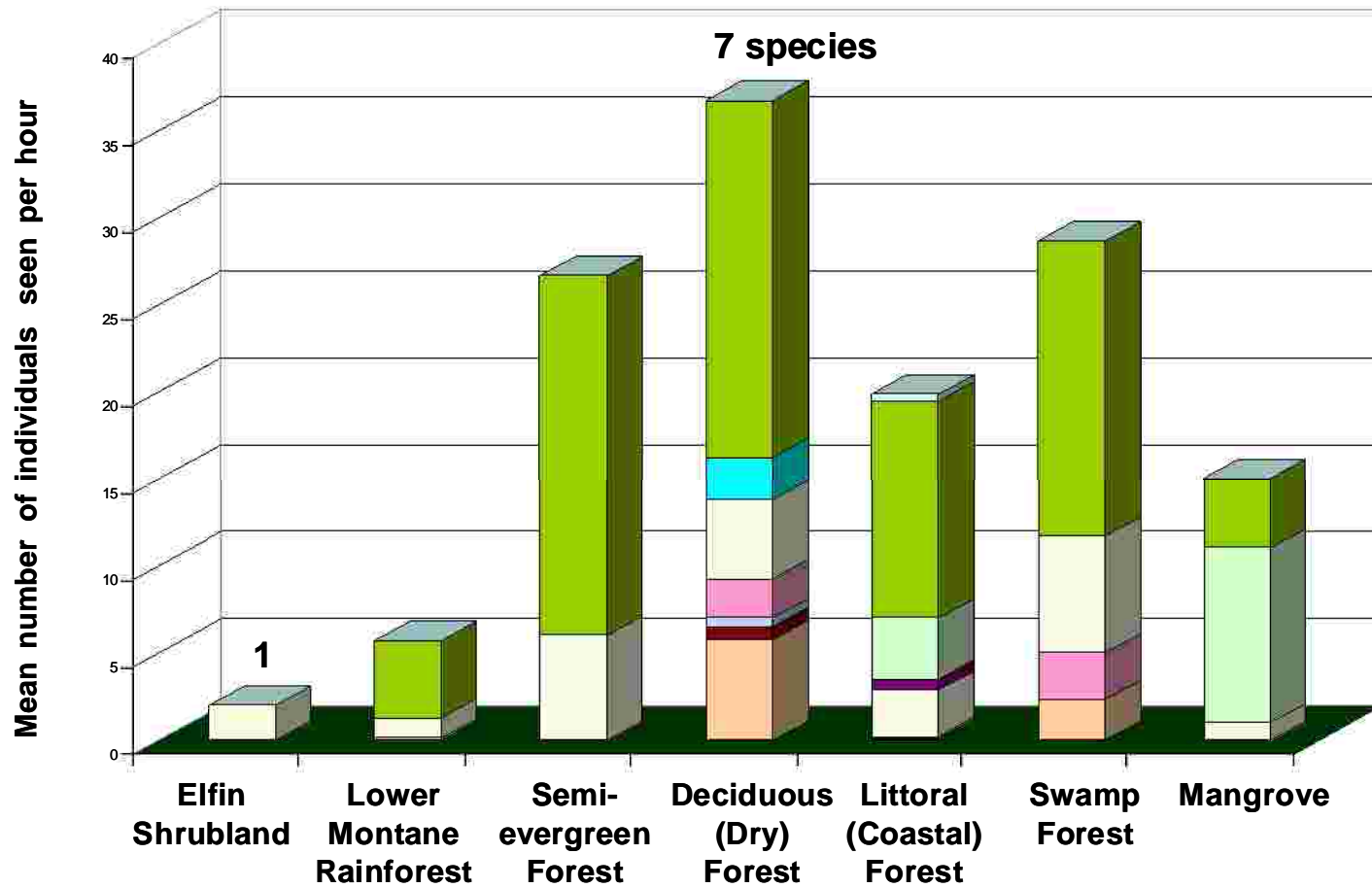
Plants	9 species	
Birds	5 species	11 subspecies
Reptiles	7 species	5 subspecies
Amphibians	1 species	
Mammals	1 species	1 subspecies
	(extinct)	
Beetles	> 200 species	



Outputs

6. Criteria for priority forest areas

REPRESENTATIVE



Outputs

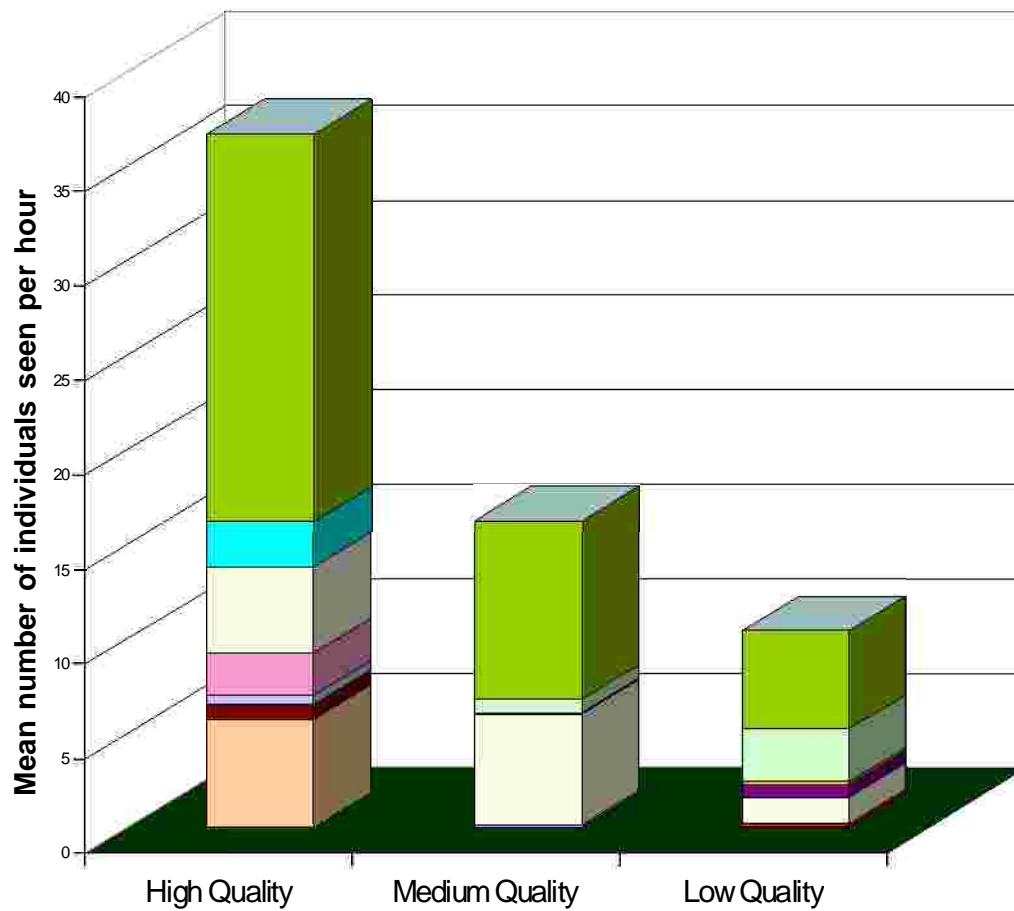
6. Criteria for priority forest areas

REPRESENTATIVE

Priority species	Forest type	% number of species	Status
Great blue heron	herbaceous swamp	6%	Species population not in Forest Reserve (38%)
Saint Lucia nightjar			
Saint Lucia wren	deciduous seasonal forest	19%	
White-breasted thrasher			
Lesser Antillean saltator	deciduous seasonal forest and semi-evergreen seasonal forest	13%	
Saint Lucia warbler			
Rufous-throated solitaire	montane rainforest	19%	Almost entirely in Forest Reserve (19%)
Semper's warbler			
Saint Lucia Amazon			
Bridled quail dove	deciduous seasonal forest, semi-evergreen seasonal forest and montane rainforest	44%	Part of species' population in Forest Reserve (44%)
Forest thrush			
Grey trembler			
Lesser Antillean flycatcher			
Saint Lucia black finch			
Saint Lucia oriole			
Saint Lucia pewee			

6. Criteria for priority forest areas

QUALITY



Outputs

6. Criteria for priority forest areas



Outputs

6. Priority forest areas

- Montane rain forests impressive record of success
- Deciduous seasonal forest very high biodiversity; under severe threat
- Semi-evergreen seasonal forest remnants; in need of restoration
- Offshore islands safe havens from introduced predators

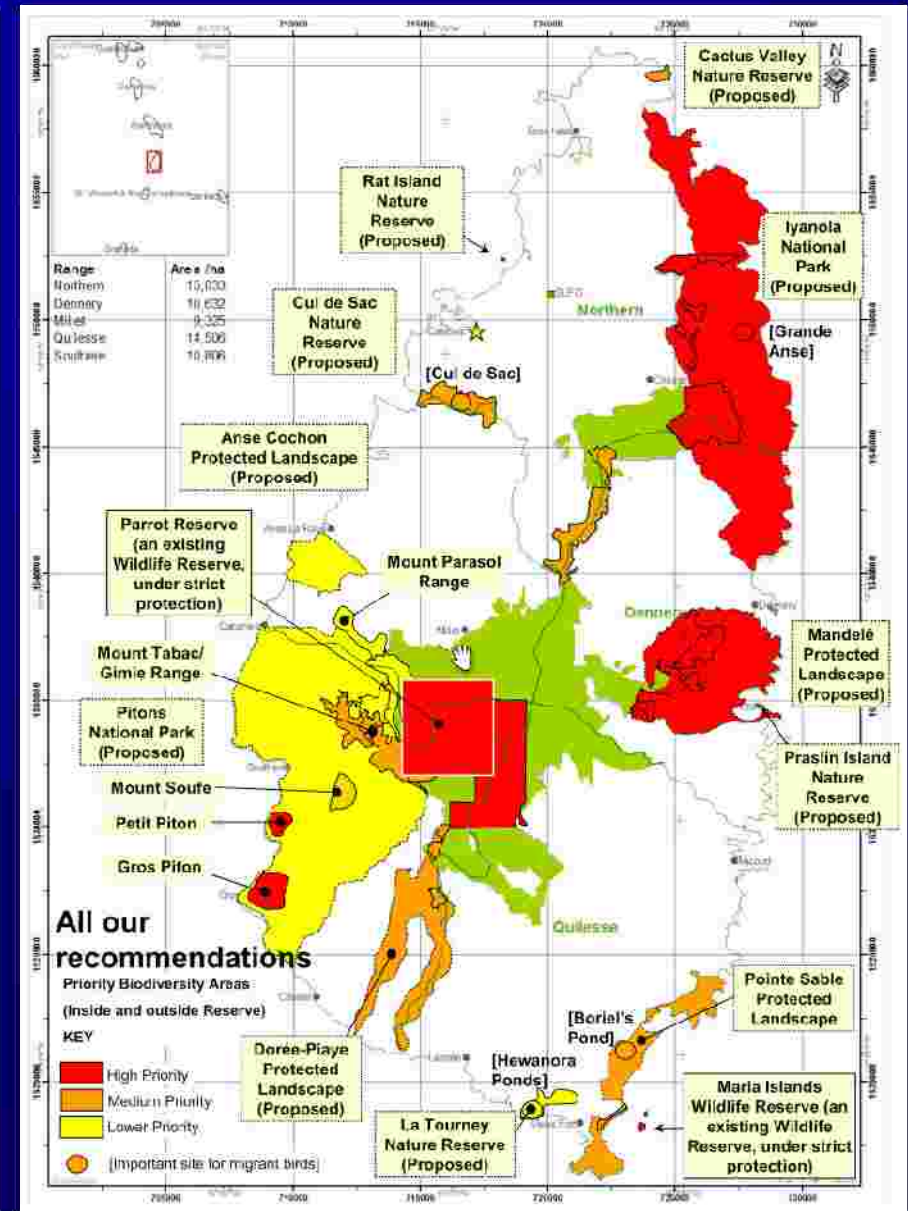
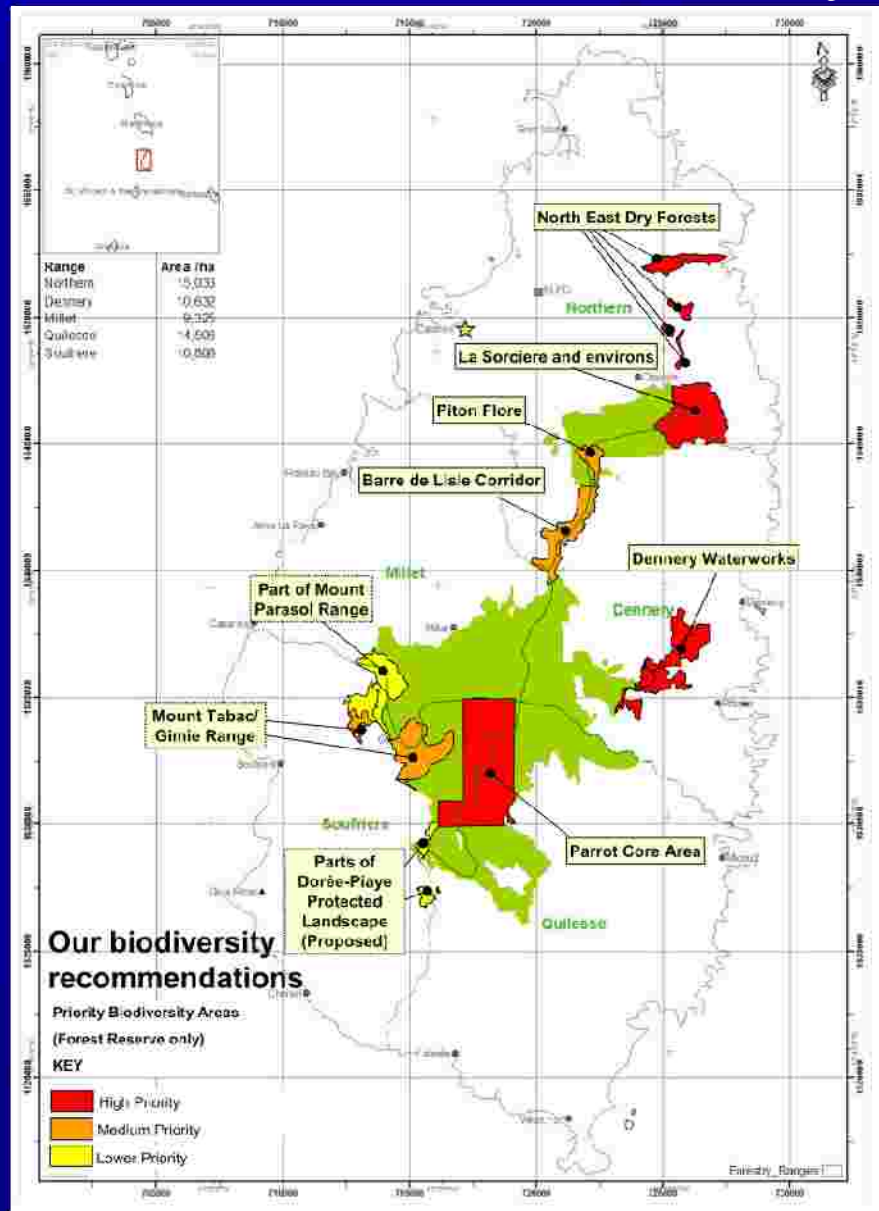
Outputs

6. Priority forests – successes and challenges

- Montane rain forests impressive record of success
- Deciduous seasonal forest very high biodiversity; under severe threat
- Semi-evergreen seasonal forest remnants; in need of restoration
- Offshore islands safe havens from introduced predators

Outputs

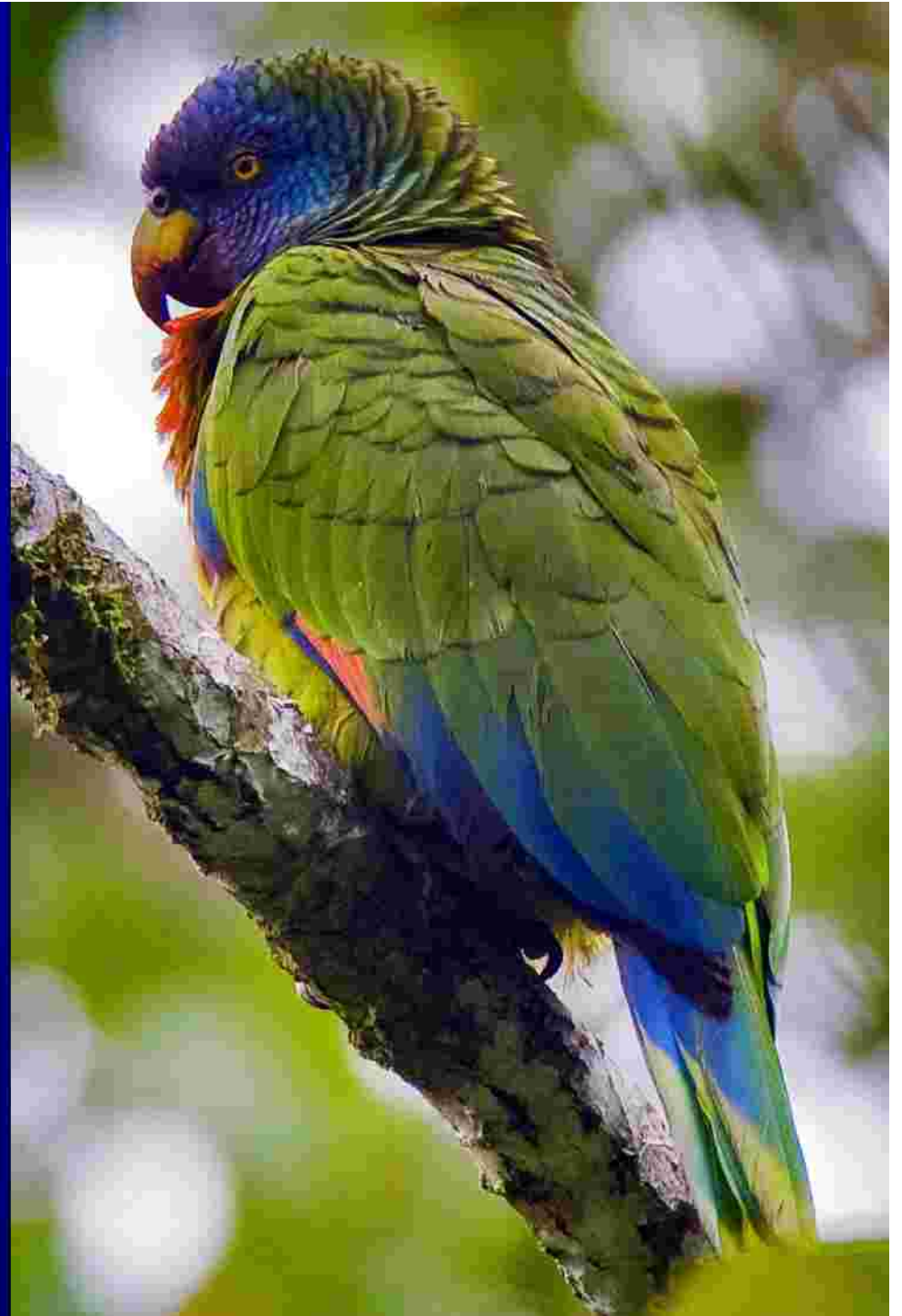
6. Priority forest areas



Outputs

6. Priority species

- Flagship species



Outputs

6. Priority species

- At very high risk of extinction



Outputs

6. Priority species

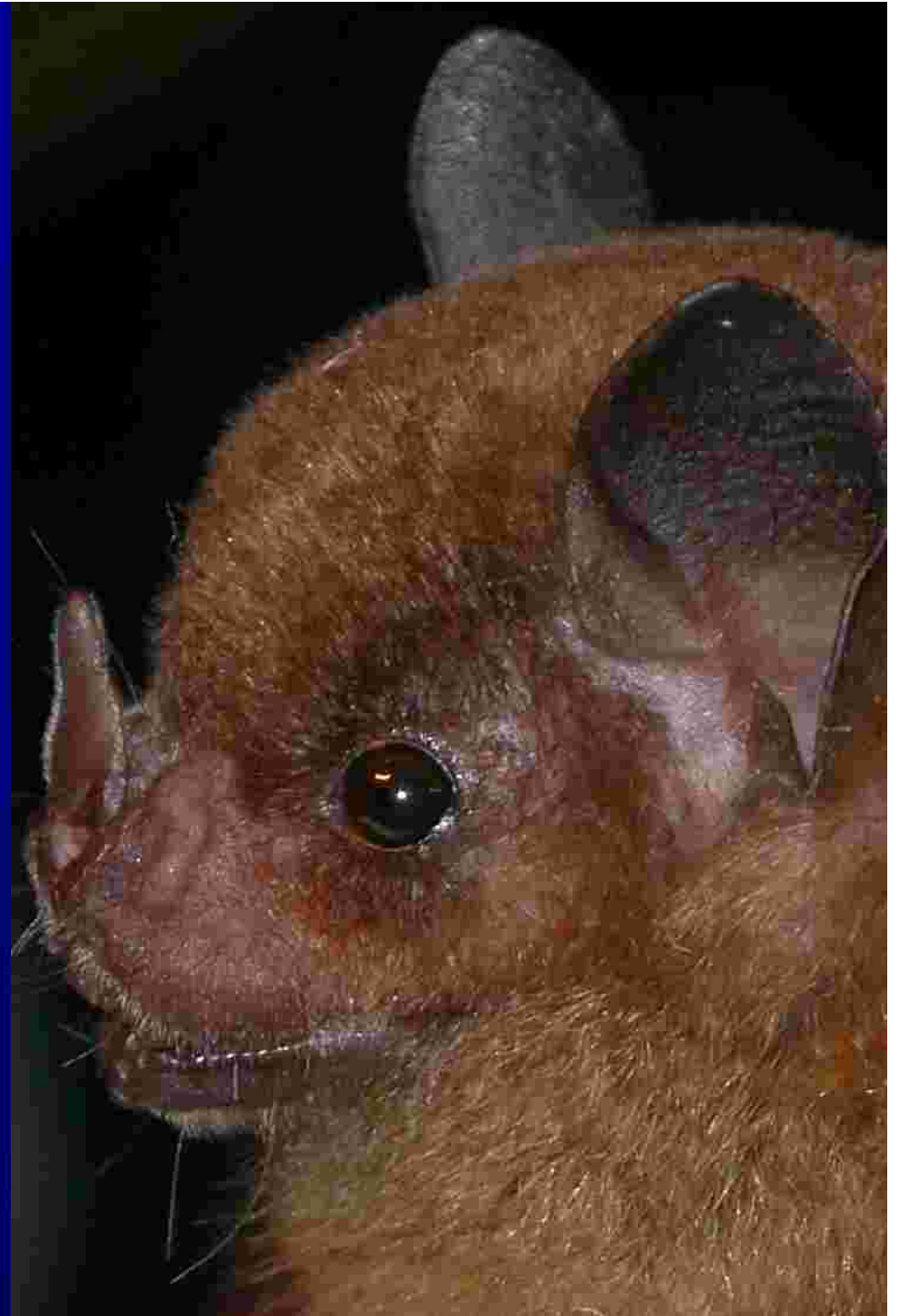
- Endemics –
irreplaceable



Outputs

6. Priority species

- Key ecosystem roles
- e.g. pollination, seed dispersal, control of insect numbers



Outputs

6. Priority species

- Endemic – irreplaceable
- At very high risk of extinction
- Key ecosystem roles
- Flagship species



Outputs

6. Priority species

THE MAIN THREATS



Outputs

7. Management Recommendations

- Site management and restoration
 - Deciduous seasonal and semi-evergreen seasonal forest are the big gaps in biodiversity management
 - Offshore islands are fragile treasures
- Species management
 - Manage small, fragmented populations
 - Reduce the impact of introduced predators
- Community involvement
 - Sustainable use of some species seems possible (Iansan)
- Research is a part of management
 - Manage ? Monitor ? Learn ? Manage better ? Monitor...

