

IUCN SSC Mascarene Islands Plant Specialist Group

2020 Report



Vikash Tatayah



Stéphane Baret

Co-Chairs

Vikash Tatayah ⁽¹⁾
Stéphane Baret ⁽²⁾

Red List Authority Coordinator

Kersley Pynee ⁽³⁾

Location/Affiliation

- ⁽¹⁾ Mauritian Wildlife Foundation, Vacoas, Republic of Mauritius
- ⁽²⁾ Société Publique Locale Écologie et Développement Durable des Espaces Naturels, La Réunion, France
- ⁽³⁾ National Parks and Conservation Service, Ministry of Agro Industry and Food Security, Port Louis, Republic of Mauritius

Number of members

40



Mission statement

To conserve native plants of the Mascarene Islands.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we hope to significantly advance towards finalisation of the national Red List of endemic plants of Mauritius and Rodrigues. We also hope to establish or reinforce collaboration with a number of international conservation organisations and take actions significantly improving the conservation of at least 10 endemic plant species. We expect to keep a fully up-to-date database of all plants present in La Réunion in order to deliver regular Red List reassessments of the entire Réunion Flora to guide our conservation actions. We envision producing factsheets on techniques for how to grow each rare plant species from La Réunion and publishing several conservation action plans for our most threatened endemic plant species. We also expect to prevent the complete loss of a patrimony and a unique biodiversity in the world: La Réunion dry forest. We hope to increase knowledge and information exchange between researchers and conservationists on the ground to ultimately improve the conservation of rare plant species from the Mascarene Islands. Even if numerous official organisms but majoritarily independent NGOs (APN, Plant ali,...) or private persons work to that, the local national botanical garden (CBNM) coordinates and pilots conservation actions at the island scale.

Targets for the 2017-2020 quadrennium

Assess

Red List: complete the assessment of 200 endemic plants from Mauritius and Rodrigues.

Research activities: (1) update on a regular basis the database of all plants present in La Réunion, including rare plant species; (2) develop new knowledge to improve the conservation of rare plant species from La Réunion (both research and grey literature).

Plan

Planning: publish emergency action plans for Extinct in the Wild plant species (22 species) and national or local action plans for rare plant species (39 species).

Act

Conservation actions: (1) conserve in situ and/or ex situ 50 Critically Endangered plant species from Mauritius and Rodrigues; (2) contribute to the successful implementation of the project ESPECE (Études et Sauvegarde des Plantes En danger Critique d'Extinction; www.reunion-parcnational.fr); (3) contribute to the successful implementation of the project LIFE+ forêt sèche, which aims to prevent the complete loss of a patrimony and a unique biodiversity in the world: La Réunion dry forest (general information at <https://www.foretseche.re/en/>). Restoration actions conducted by NGOs (Plant ali,...) contribute largely to save rare plant species (*Sideroxylon majus*, *Ochrosia borbonica*,...).

Network

Capacity building: conduct training courses in plant conservation.

Synergy: develop or reinforce collaboration with at least three international conservation organisations.

Inflorescence (top) and branches and leaves (bottom) of the Endangered *Zanthoxylum heterophyllum*, La Réunion. This species inspired the logo of the MIPSG
Photo: Stéphane Baret



Communicate

Technical advice: publish factsheets on techniques for how to grow each rare plant species from La Réunion.

Activities and results 2020

Assess

Red List

i. Two-hundred and eighty-one (281) flowering plants in Mauritius and 58 taxa on Rodrigues were preliminarily assessed in 2016 and 2019, respectively. Fifteen (15) Rodrigues species have been submitted to the IUCN Red List for assessment (*Polyscias rodriguesiana*, *Hyophorbe verschaaffeltii*, *Latania verschaaffeltii*, *Diospyros diversifolia*, *Clerodendrum laciniatum*, *Foetidia rodriguesiana*, *Dombeya rodriguesiana*, *Hibiscus liliiflorus*, *Eugenia rodriguesensis*, *Pandanus heterocarpus*, *Pandanus tenuifolius*, *Badula balfouriana*, *Ixora trilocularis*, *Pyrostria revoluta*, *Zanthoxylum paniculatum*) and 28 partially drafted for Mauritius (*Badula insularis*, *Calophyllum eputamen*, *Chassalia coriacea*, *Dombeya sevathianii*, *Erythrospermum monticolum*, *Eugenia alletiana*, *Eugenia kanakana*, *Eugenia longuenensis*, *Eugenia lucida*, *Eugenia neofasciculata*, *Eugenia orbiculata*, *Eugenia pyxidata*, *Gaertnera psychotrioides*, *Gaertnera rotundifolia*, *Ixora parviflora*, *Memecylon laxiflorum*, *Norhonia macrophylla*, *Norhonia obovata*, *Pandanus barklyi*, *Pandanus wiehi*, *Polyscias maraisiana*, *Protium obtusifolium*, *Pyrostria cordifolia*, *Pyrostria macrophylla*, *Sideroxylon cinereum*, *Sideroxylon puberulum*, *Syzygium glomeratum*, and *Syzygium pyneei*). The drafting of Red List assessments is ongoing. (KSR #1, 2, 32)





Plant rescue from Ile aux Aigrettes when the oil spill took place in August 2020
Photo: Nik Cole



Plant rescue from Ile aux Aigrettes when the oil spill took place in August 2020
Photo: Nik Cole

Research activities

- i.** A new update of the database of all plants present in La Réunion, including rare plants species, took place in December 2020. The importance of developing a database for automatic evaluation of IUCN criteria is noted. (KSR #32)
- ii.** A PhD on the mutualistic interactions between fleshy fruits and frugivorous vertebrates (or lack of) and consequences on the tropical forest regeneration in the Mascarene has been successfully completed by Dr Sebastien Albert. A booklet on the restoration of Réunion natural habitats has been written by Jo Minatchy and Stephane Baret. (KSR #32)

Plan

Planning

- i.** Three new national emergency action plans (Plan National d'Actions, PNA) were produced, covering 19 protected plants: (1) *Euphorbia* species, (2) semi-dry bushes group, and (3) the rarest plants species group. (KSR #15)
- ii.** Through a Franklinia Foundation/Botanic Gardens Conservation International project, six action plans were drafted: Rodrigues (*Antirhea bifurcata*, *Badula balfouriana*, *Dombeya rodriguesiana*, *Foetidia rodriguesiana*, *Zanthoxylum paniculatum*) and Mauritius (*Zanthoxylum heterophyllum*). (KSR #15)

Act

Conservation actions

- i.** Various governmental, non-governmental and private sector institutions in Mauritius and Rodrigues have conserved 50 (or more) Critically Endangered plant species in situ and ex situ (in nurseries, field gene banks, seed banks and in botanical gardens). (KSR #29)

ii. Implementation of the project ESPECE:

Mainly set up in 2020 in a forest of the 'Département de La Réunion' managed by the Société Publique Locale Écologie et Développement Durable des Espaces Naturels (SPL EDDEN): five *Aloe macra*, 10 *Dombeya populnea*, 10 *Drypetes caustica*, two *Polyscias aemeliguineae*, 46 *Sideroxylon majus*, and five *Tournefortia arborescens* in two different places. (KSR #25, 27)

iii. In order to recreate or restore a corridor of semi dry forest, around 29,000 native plants were planted in 2020, of which 8,172 plants from 24 species are protected. Monitoring is ongoing. The 'Conservatoire du Littoral' is leading the project, in collaboration with Reunion National Park. (KSR #31)

Network

Capacity building

i. In 2020, a training in the use of drones for surveying inaccessible areas (e.g. mountain tops and cliffs) was planned thanks to support from Botanic Gardens Conservation International (BGCI) and National Tropical Botanical Garden, Hawaii, intended for all conservation organisations in Mauritius. However, it could not take place due to the global COVID-19 pandemic. The course will be delivered once the COVID-19 situation allows. (KSR #17)

Synergy

i. We reinforced collaboration with Jardins Botanique de Brest (France), Botanic Gardens Conservation International and Missouri Botanical Garden, and developed links with the National Tropical Botanical Garden, Hawaii (drone training and conservation of *Zanthoxylum paniculatum* in Rodrigues, through BCGI). (KSR #29)



Landscape showing endemic grassland impact by cows at La Réunion
Photo: Stéphane Baret



Critically Endangered *Ruizia cordata*
Photo: Stéphane Baret

Acknowledgements

Mauritius: Mauritian Wildlife Foundation, National Parks and Conservation Service, Forestry Service, Ferney Valley, Ebony Forest Ltd, Mauritius Herbarium, University of Mauritius. Rodrigues: Mauritian Wildlife Foundation, Forestry Service, François Leguat Reserve. Republic of Mauritius: Funders and scientific supporters: Botanic Gardens Conservation International, Franklinia Foundation, Conservatoire Botanique de Brest/ Arche aux Plantes–France, Critical Ecosystems Partnership Fund, Royal Botanic Gardens Kew–UK, National Tropical Botanical Garden, Hawaii, Missouri Botanical Garden–US. La Réunion: Conservatoire Botanique National de Mascarin (CBNM), Parc national de La Réunion, Société Publique Locale Écologie et Développement Durable des Espaces Naturels (SPL EDDEN), Office National des Forêts (ONF), Conservatoire du Litoral (CdL), Conseil Général (Département de La Réunion), Association Plant Ali, Association Initiative pour la Restauration écologique en milieu Insulaire (IRI), Université de La Réunion, CIRAD.

Summary of activities 2020

Components of Species Conservation Cycle: 4/5

Assess	3	
Plan	2	
Act	3	
Network	3	

Main KSRs addressed: 1, 2, 15, 17, 25, 27, 29, 31, 32

KSR: Key Species Result