

# IUCN SSC Madagascar Plant Specialist Group

2019 Report



Vololoniaina Jeannoda

## Chair

Vololoniaina Jeannoda <sup>(1)</sup>

## Vice-Chair

Bakolimalala Rakouth <sup>(1)</sup>

## Red List Authority Coordinator

Sylvie Andriambololona <sup>(2)</sup>

## Location/Affiliation

<sup>(1)</sup> Plant Biology and Ecology Department,  
Faculty of Sciences, University of Antananarivo,  
Madagascar

<sup>(2)</sup> Missouri Botanical Garden Representation,  
Antananarivo, Madagascar

## Number of members

60

## Mission statement

The mission of the Madagascar Plant Specialist Group (MPSG) is to increase the knowledge on Madagascar plant diversity (flora and habitats) by assessing and/or reviewing their conservation status (especially for IUCN and CITES) and promote their conservation by identifying conservation priorities, giving recommendations for their survival, and reinforcing people's efforts toward the conservation of plant diversity.

## Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision that we will complete the assessment of 3,500 Madagascar plant species, which represents one of the targets of the Barometer of Life. By achieving that goal, we hope to increase our knowledge of the Key Biodiversity Areas (KBAs) of our country. Through the implementation of conservation programmes developed by ourselves and in collaboration with our partners, we hope to bring to local communities the capacity to restore the threatened crop wild relative species and patrimonial species through setting up of nurseries, *in situ* and *ex situ* conservation activities and developing management plans for natural resources. We also plan to generate more knowledge for Data Deficient species by conducting research on lost species that have not been collected for more than 50 years. Since the MPSG is also part of the CITES scientific authority of Madagascar, the assessments that have already been done or will be done during the 2017–2020 quadrennium, especially those on orchids, succulents and timber wood (palissander, rosewood and ebony), will contribute to reinforce implementation of CITES' rules.

## Targets for the 2017-2020 quadrennium

### Assess

Red List: (1) reassess and review assessment of a total of ca. 1,700 Madagascar plant species; (2) review assessment of a total of ca. 350 endemic species belonging to different taxonomic groups or belonging to specific habitats; (3) assess and review assessments of ca. 2,000 Madagascar trees; (4) start a national Red List for plants.

Research activities: research on lost species from Madagascar.

### Plan

Planning: (1) elaborate a conservation strategy for threatened wild yams and the most used yams from Madagascar; (2) elaborate a national strategy for plant conservation in Madagascar.

### Act

Conservation actions: (1) traditional knowledge and conservation and restoration of patrimonial plant species in Vohibola forest (a KBA); (2) elaborate a national strategy for plant conservation in Madagascar.

### Network

Capacity building: (1) workshop on the integration of Knowledge Products mobilised by IUCN through the Integrated Biodiversity Assessment Tool (IBAT) to support decision making; (2) start a national Red List for plants.

## Activities and results 2019

---

### Assess

#### Red List

**i.** Assessments were completed for 160 endemic species from miscellaneous plant families including Xanthorrhoeaceae (Aloe, 106 species), Orchidaceae, Acanthaceae and Rubiaceae. Assessments were undertaken by the team of Kew Madagascar Conservation Centre (KMCC) and reviewed by the MSPG. The reviewers were composed of botanists from Missouri Botanical Garden (MBG), the Department of Plant Biology and Ecology (University of Antananarivo), and The Parc Botanic and Zoologique de Tsimbazaza (PBZT). Final results are all now published on the IUCN Red List website. (KSR #2)

**ii.** Of the 2,000 tree species targeted for assessment under the project 'Assessing the Status of Madagascar's Trees for Effective Conservation of Key Biodiversity Areas And Protected Areas' (a collaboration between Botanic Garden Conservation International (BGCI) and the Madagascar Plant Specialist Group), 1,497 endemic species from miscellaneous families in the Western region, including Araliaceae, Boraginaceae, Pandanaceae, Sarcocaulaceae, Sphaerosepalaceae and Thymelaeaceae, were assessed. By the end of the year 2019, 956 species were published on the IUCN Red List, of which 782 species were assessed as threatened (299 Vulnerable, 384 Endangered and 99 Critically Endangered) and 17 Data Deficient. In order to reduce the current lack of comprehensive conservation assessments for trees in some KBAs of western Madagascar, assessments of the target species were undertaken by the botanists from Missouri Botanical



© KMCC, Rakotoarisoa

*Tricalysia criptocalyx*, LC  
Photo: Solofo E. Rakotoarisoa

*Pachypodium rutenbergianum*, LC  
Photo: Solofo E. Rakotoarisoa



*Sobennikoffia poissoniana*  
Photo: Landy R. Rajaovelona



*Angraecum rutenbergianum*  
Photo: Landy R. Rajaovelona

Garden and Kew Madagascar Conservation Centre. The work was coordinated by Botanic Garden Conservation International and the Madagascar Plant Specialist Group. Three workshops were organised in Antananarivo in order to reinforce the capacity of the MPSG in Red List assessment and for the validation of the assessments. About 30–40 members of the MPSG, together with two representatives from BGCI, participated in the review of each species assessment. (KSR # 1, 2, 22, 35)

**iii.** Publication of the book *Red List of the Dry Forest Trees of Madagascar*, including 900 assessments of trees in the west of Madagascar: the book is part of the output of the project on the assessment of western Madagascar KBA trees undertaken by MPSG and BGCI. It is a compilation of all tree species assessed since 2018 and published now on the IUCN Red List website. The book is planned to be launched in the last quarter of 2020. (KSR #1, 4, 22)

## **Plan**

### Planning

**i.** Action plan for eight species of trees from western KBAs in Madagascar: this is a part of the MPSG/BGCI project on Western KBA Trees of Madagascar. In order to mitigate the main threats on eight threatened target species, an action plan for each of them was developed taking into account all available data about the taxonomy, the description, IUCN Red List status, distribution range, ecology, biology and life history and the description of the threats on the wild population. Research for each species was undertaken by MSc students from the Department of Plant Biology and Ecology of

the University of Antananarivo and was supervised by lecturers of the same Department, and comprised field studies on each species which dealt with population data. It allowed the students to defend a Master thesis at the University of Antananarivo. The specific objectives of each of these studies are: (1) to characterise the habitat of each target plant species; (2) to describe the biogeographic distribution of these species (sub-populations and populations); (3) to know the different ways in which these species are used and/or exploited and their local values by the population; (4) to determine conservation status according to the IUCN (2001) approach for these species. The students were trained on surveying and inventory methods to build their capacity to develop a species management plan: (1) extensive interaction with the project team: study largely supervised by the site manager; (2) the three KBAs subject to the field studies are all important plant areas and identified as priority for plant conservation; (3) eight threatened woody species proposed by the managers to be the targets of the studies. (KSR # 7, 12, 28, 35)

## **Act**

### Conservation actions

**i.** Action plan for the Palms of Madagascar: with the funding from the Sud Expert Plantes Développement Durable (SEP2D), a national action plan was initiated between various partners of the MPSG: University of Antananarivo, PBZT, Arboretum de Ranomafana, MBG and Royal Botanic Gardens, Kew. The aim of this action plan is to describe the current conservation status of the palms of Madagascar, and then to suggest adequate conservation measures to be prioritised at different levels and with all involved stakeholders. For this action plan, a collaboration with the IUCN SSC Palms



Specialist Group is planned. The final version of the strategy is expected to be published at the end of 2020. (KSR # 7, 12, 28, 35)

#### **Network**

##### Capacity building

i. National Red List Alliance (NLRA): MPSG has been invited to join the Alliance for Africa region; the aim of the alliance is to set up species assessment working sets in the IUCN SIS database, IUCN SSC internal grants, IUCN Red List training, etc. These requests will be easy to process if we motivate that these countries are part of the NRLA. (KSR #8)

#### **Acknowledgements**

We thank Critical Ecosystem Partnership Fund (CEPF) that helped us to cover different costs: the funding of the project, the assessment of the trees from Madagascar western KBAs, the training workshop and the review workshop for the trees from western KBAs. We also want to thank Sarah Oldfield from the Global Tree Specialist Group, Malin Rivers and Emily Beech from BGCI, who provided Red List training and assistance during the Western KBAs trees project.

#### **Summary of activities 2019**

Components of Species Conservation Cycle: 4/5

Assess	3	
Plan	1	
Act	1	
Network	1	

Main KSRs addressed: 1, 2, 4, 7, 8, 12, 22, 28, 35

KSR: Key Species Result



© KMOCC, Rakotoarisoa

*Foetidia asymetrica*, LC  
Photo: Solofo E. Rakotoarisoa