



# Species

ISSUE 63

## 2022 Report of the IUCN Species Survival Commission and Secretariat



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## The IUCN Species Survival Commission (SSC)

The IUCN Species Survival Commission (SSC) is a science-based network of thousands of volunteer experts from almost every country of the world, all working together toward achieving the vision of “a just world that values and conserves nature through positive action to both prevent the loss and aid recovery of the diversity of life on earth.”

Members of SSC belong to one or more of near 200 Specialist Groups, Red List Authorities, Action Partnerships, Task Forces, and Conservation Committees that make up the Network, each focusing on a taxonomic group (plants, fungi, mammals, birds, reptiles, amphibians, fishes, and invertebrates), national species, or a disciplinary issue, such as sustainable use and livelihoods, translocation of species, wildlife health, climate change, and conservation planning.

Framed by the Species Conservation Cycle, SSC’s major role is to provide information to IUCN on biodiversity conservation, the inherent value of species, their role in ecosystem health and functioning, the provision of ecosystem services, and their support to human livelihoods. This information is fed into the IUCN Red List of Threatened Species.

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### 2021-2025 Species Strategic Plan

The IUCN Species Strategic Plan encompasses the joint work of the IUCN Species Survival Commission and a number of partnerships to achieve more than 2,700 targets proposed by the Network during the 2021-2025 quadrennium.

To accomplish those targets, the Species Conservation Cycle was established, which is the conceptual framework for the Network activities. The Species Conservation Cycle’s main purpose is to guide efforts for valuing and conserving biodiversity through three essential components that are linked to each other:

**ASSESS:** Understand and inform the world about the status and trends of biodiversity.

**PLAN:** Develop collaborative, inclusive and science-based conservation strategies, plans and policies.

**ACT:** Convene and mobilise conservation actions to improve the status of biodiversity.



Their implementation requires two transversal components:

**NETWORK:** Enhance and support our immediate network and alliances to achieve our biodiversity targets.

**COMMUNICATE:** Drive strategic and targeted communications to enhance our conservation impact.

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### SSC Species Report

Annual progress in the implementation of the 2021-2025 Species Strategic Plan is documented in the SSC *Species Report*, which consists of a comprehensive description and analysis of the activities and results generated by the members of the SSC Network each year. Each SSC Group contributes to this document by providing a yearly summarised description of their achievements, which is presented in stand-alone reports.

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## Structure of the IUCN SSC Stand-alone Report

Stand-alone reports summarize the activities conducted and results generated by each group member of the SSC. Following, is the structure of the stand-alone report and the contents under each session.

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### Title of the SSC Group

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### Photograph(s) of the Chair / Co-Chairs

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### Group information

Includes names of Chair / Co-Chairs, Vice-Chairs, Deputy Chairs, Red List Authority Coordinators and Program Officers, their institutional affiliations, number of members and social networks currently active.

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### Logo of the SSC Group

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### Mission statement

Includes the mission of the group.

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### Projected impact for the 2021-2025 quadrennium

Includes the description of the impact on species conservation resulting from the implementation of the targets formulated by the group for the 2021-2025 quadrennium.

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### Targets for the 2021-2025 quadrennium

Includes the targets planned by the SSC Group for the 2021-2025 quadrennium ordered alphabetically by component of the Species Conservation Cycle. Each target is labeled with a numerical code (e.g., T-001, T-012) that identifies it in the SSC DATA database and its status for the reported year is indicated (Not initiated, On track or Achieved).

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### Activities and results

Includes the targets for which activities were conducted and results were generated during the reported year, ordered alphabetically, first by component of the Species Conservation Cycle, and second by Activity Category. Description of activities and results includes the indicator that best describes progress, its associated quantitative or qualitative result, and the narrative description of the activity conducted or result obtained. Each activity or result reported is linked to the Key Species Result to which it is mainly associated (e.g., KSR#1, KSR#5).

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### Acknowledgements

Includes the acknowledgements to funding agencies, partners, and persons who contributed to the progress of the targets of the group.

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### Summary of achievements

Summarises information of the group's strategic plan for the quadrennium and progress achieved implementing targets for all the components of the Species Conservation Cycle during the reported year.

Animalia

Fungi

Plantae

National Species

Disciplinary

Action Partnership

Task Force

Red List Authority

Committee

Center for Species Survival

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### Example for the recommended citation:

Ferreira de Siqueira, M, and Fernandez, E. 2023. 2022 Report of the Brazil Plant Red List Authority. In: Nassar, JM, García, L, Mendoza, L, Andrade, ND, Bezeng, S, Birkhoff, J, Bohm, M, Canteiro, C, Geschke, J, Henriques, S, Ivande, S, Mileham, K, Ramos, M, Rodríguez, A, Rodríguez, JP, Street, B, and Yerena, E (Eds.). 2022 Report of the IUCN Species Survival Commission and Secretariat. International Union for Conservation of Nature. 12 pp.

# IUCN SSC Brazil Plant Red List Authority



**RED LIST AUTHORITY  
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**RED LIST AUTHORITY  
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**NUMBER OF MEMBERS**

20

**SOCIAL MEDIA AND WEBSITE**

Facebook: @jbrj.cncflora

Instagram: @jbrj.cncflora

## Mission statement

To coordinate, promote and contribute to all necessary conditions to avoid extinctions of Brazilian flora species, in line with the targets of the Global Strategy for Plant Conservation (GSPC) and with the national mandate to assess extinction risk for the National Red List of Brazilian flora, for the elaboration of action plans and maps of priority areas for the conservation of species threatened with extinction.

## Projected impact 2021–2025

By the end of 2025, we aim to increase our knowledge and response capacity to secure a perennial fate for the Brazilian flora, in line with the post-2020 Global Strategy for Plant Conservation framework. During the quadrennium, the Brazil Plant Red List Authority (BP-RLA)/Brazilian National Centre for Plant Conservation (CNCFlora) will continue investigating plant conservation status while aiding stakeholders with the implementation of a substantial number of National Action Plans. Extinction risk assessments will target endemic species, trees (under the scope of the Global Tree Assessment lead by Botanic Gardens Conservation International–BGCI), selected

taxonomic groups, Crop Wild Relatives and species of economic/social significance, while reassessments of conservation status of species will be conducted so that Global and National Red Lists are continually updated. The extinction risk assessments review process will be maintained, working on demand (e.g. reviewing assessments for the Sample Red List Index initiative and other Specialist Groups and Red List Authorities). We expect to further apply in-country a set of biodiversity conservation metrics such as Species Threat Abatement and Recovery (STAR) and the IUCN Green Status of Species and to consolidate the foundations to elaborate a Red List Index representative of the Brazilian flora. Understanding species states and fates will allow the detection of priority areas for plant conservation in Brazil and the use of the IUCN Red List as a barometer. Capacity building in red listing and conservation planning sought for this quadrennium is expected to strengthen the network of qualified professionals working with appropriate skills and facilities toward the implementation of sound conservation outcomes.

## Targets 2021–2025

### ASSESS

**T-001** Complete global Red List assessments of *circa* 1,200 plant species by 2025.

Status: On track

**T-004** Advance with a National Red List Index for Plants by 2025.

Status: On track

**T-005** Participate in analyses required to calculate STAR Metric for Threatened and Near Threatened Brazilian endemic plant species by 2022.

Status: Achieved

**T-011** Review extinction risk assessments of Brazilian plants conducted by other Specialist Groups/Red List Authorities.

Status: On track

**T-013** Assess the Green Status of Species for 10 cacti threatened with extinction.

Status: Achieved

**T-014** Conduct scientific expeditions to designated areas for the implementation of Territorial Action Plans for threatened flora conservation.

Status: On track

**T-016** Conduct the I Workshop 'New Strategies to Achieve Goal 2 of the GSPC in Brazil: the challenge to assess the full conservation status of the national flora'.

Status: Achieved



## PLAN

**T-006** Update the Faveiro Conservation Action Plan by 2022.

Status: Achieved

**T-007** Develop at least seven Conservation Action Plans for strategic territories to advance plant conservation in the country by 2025.

Status: On track

## ACT

**T-012** Support the Brazilian Environmental Ministry to issue an updated Official Red List for the Brazilian Flora by 2022.

Status: Achieved

**T-021** Provide scientific advice and information for the identification and conservation of species of concern in national and international contexts.

Status: On track

**T-022** Support the implementation of conservation actions of at least seven Conservation Action Plans for strategic territories to advance plant conservation in Brazil.

Status: On track

**T-023** Support the preparation and publication of lists of vascular plants in Protected Areas in Brazil, assisting in decision-making.

Status: On track

## NETWORK

**T-002** Train four Red List assessors as trainers by the end of 2025 (two members by 2022 and a further two by 2025).

Status: On track

**T-003** Train four members of the BP-RLA Conservation Planning Unit in Conservation Planning Tools by 2025.

Status: On track

**T-008** Translate the official IUCN Red List online training course and all its associated materials (guidelines, classification schemes, mapping standards) into Portuguese.

Status: Achieved

**T-010** Recruit at least 20 new members from distinct backgrounds and as diverse as possible in terms of geographic representation and gender to compose the Stand Alone BP-RLA by 2023.

Status: On track

## COMMUNICATE

**T-009** Participate in the IUCN World Conservation Congress in 2021.

Status: Achieved

**T-015** Publish social media releases related to the work developed by CNCFlora/ Rio de Janeiro Botanical Garden Research Institute (JBRJ).

Status: On track

**T-018** Contribute to the production of technical and scientific publications related to plant research and conservation.

Status: On track

**T-019** Publish at least three newsletters annually on plant conservation.

Status: On track

**T-020** Publish at least three Conservation Action Plans for plants.

Status: Not initiated

**T-024** Participate in scientific or public events (nationally and internationally).

Status: On track

## Activities and results 2022

### ASSESS

#### Green List

**T-013** Assess the Green Status of Species for 10 cacti threatened with extinction. (KSR 6)

Number of new Green Status of Species assessments completed: 10

Result description: Developed during the project 'An integrative approach to advance the conservation of the biodiversity of endangered species in the Brazilian Cerrado', conducted by CNCFlora/JBRJ, ICMBio and Clavaris Institute | IUCN SSC Center for Species Survival Brazil, and financially supported by the Critical Ecosystem Partnership Fund - CEPF (ConservationGrants Number: CEPF-112330), we concluded, with the support of Cactaceae specialists and Dr Molly Grace, coordinator of the IUCN Green Status of Species Core Team, the application of the Green Status for Species protocol for 10 Cactaceae threatened with extinction. The outcomes of this effort are currently under scrutiny by experts and the Green Status of Species team and are being prepared to be published in 2023. The Green Status of these cacti is being submitted alongside its reassessments or extinction risk.

#### Red List

**T-001** Complete global Red List assessments of circa 1,200 plant species by 2025. (KSR 6)

Number of new national Red List assessments published: 600

Result description: Between 2021-2022, the IUCN SSC BP-RLA has submitted for



*Begonia piranga* L. Kollmann and Gonella (Begoniaceae), another recently described species from the Rupestrian Fields of Serra do Padre Ângelo, Conselheiro Pena county (MG), already Endangered (EN)  
Photo: Gláucia Ferreira Crispim



*Chionolaena lychnophorioides* Sch.Bip. (Asteraceae), a nationally threatened species (VU) found at a disjunct site at Serra do Padre Ângelo, Conselheiro Pena County (MG)  
Photo: Gláucia Ferreira Crispim



*Passiflora ita* Mezzonato, R. S. Ribeiro and Gonella (Passifloraceae) in its narrow habitat at Pico da Bela Adormecida, Serra do Padre Ângelo, Alvarenga County (MG). The species was recently described and is already considered Endangered (EN)  
Photo: Eduardo Fernandez

publication at the IUCN Global Red List over 600 endemic/near-endemic tree species assessments, from multiple plant families, as well as further 33 risk assessments of the following genus: *Acrocomia*, *Piptolepis*, *Drosera*, *Dimorphandra*, *Plinia* and *Ternstroemia*. These results are about to be made publicly available on the IUCN Global Red List and were only possible due to the large involvement of the extensive network of botanists and plant experts collated by the *Flora do Brasil 2020* project, another initiative from the JBRJ and several partners which currently houses over 1,000 individuals. Moreover, during the workshop ‘New Strategies for Achieving Target 2 of the Global Strategy for Plant Conservation in Brazil’, held in June 2022 in Rio de Janeiro Botanic Garden – JBRJ (<https://www.gov.br/jbrj/pt-br/assuntos/noticias/jbrj-promove-workshop-sobre-avaliacao-do-risco-de-extincao-de-especies-da-flora-brasileira>), which aimed to (1) consolidate the state of the art on extinction risk assessments of the Brazilian flora; (2) systematise the obstacles and potential solutions in the currently adopted workflow; (3) implement strategies to gain scale in conducting extinction risk assessments of the Brazilian flora (e.g. semi-automated assessments validated by experts), over 800 Least Concern (LC) assessments coming from the ten most diverse plant families in Brazil plus LC assessments of Bryophytes and Ferns were validated by a network of over 80 experts, and will be submitted to the IUCN Global Red List during the first semester of 2023, adding up substantially to the total number of Brazilian

endemic plant species which assessments will be made available at the Global IUCN Red List during the quadrennium. Finally, we have been collaborating since early 2022 with the IUCN SCC Conifers Specialist Group, in order to issue extinction risk reassessments of all Brazilian conifers by 2023.

**T-004 Advance with a National Red List Index for Plants by 2025.** (KSR 7)

Number of countries that have done National Red List Index (NRLI) or nationally-disaggregated global RLI: 0

Result description: Although knowledge of Brazilian plant biodiversity and its conservation status improved substantially during the last decade, it is yet insufficient to robustly infer trends, states and putative fates of Brazilian plant diversity through a Red List Index. Also, the current numbers considered for distinct scopes (taxonomical, biological, spatial, biogeographic, political, institutional, among other possibilities) in terms of the total amount assessed and reassessed are far too low to robustly infer conservation status trends in-country and therefore, produce a national RLI relevant for plants. These challenges are highlighted by (1) the lack of consistent application of IUCN criteria in National Red Lists published prior to 2014’s National Red List publication; (2) the lack of fully assessed taxonomic groups that can be considered representative of the Brazilian flora as a whole (e.g. all or close to all Angiosperms, all Fabaceae-Leguminosae species); (3) the absence of repeated extinction risk reassessments over time; (4) the small number

of ongoing tailored conservation actions to bring back species from the verge; (5) the challenge to detect genuine changes in category status while the majority of the country’s flora is still poorly known and most indicators are not fully used in the country. However, initiatives to test and develop an RLI for Brazilian plants are ongoing even in the face of these challenges, and a novel approach using tropical trees from the Atlantic Forest Hotspot is under development to be published during 2023.

**T-011 Review extinction risk assessments of Brazilian plants conducted by other Specialist Groups/Red List Authorities.** (KSR 5)

Number of assessment reviewed: 170

Result description: In 2022, BP-RLA/CNCFlora/JBRJ reviewed over 170 extinction risk assessments for plants occurring in the country, most of them related to assessment/reassessments undertaken for several partners of the Global Tree Assessment project in South America (collaborators from Colombia, Venezuela and Ecuador) and from the BGCI.

**T-016 Conduct the I Workshop “New Strategies to Achieve Goal 2 of the GSPC in Brazil: the challenge to assess the full conservation status of the national flora”.** (KSR 6)

Number of new global Red List assessments completed: 900

Result description: The Workshop ‘New Strategies to Achieve Goal 2 of the GSPC in Brazil: the challenge to assess the full conservation of the national flora’ was held



Plant collections at Pico do Sossego, an isolated peak within Serra do Padre Angelo (MG) only recently reached by botanists and a truly botanical treasure in the region, housing several endemic, threatened and new species to science.  
Photo: Gláucia Ferreira Crispim



between June 20 and 22, 2022, at the Environment Museum, in Rio de Janeiro Botanic Garden – JBRJ, Rio de Janeiro, Brazil. The event was attended by around 80 botanists, including botanical specialists in the 10 most diverse families in the country, botanical specialists from the groups with the least availability of official assessments at the moment (Ferns and Lycophytes and Bryophytes) and specialists in the assessment of flora conservation. Nearly 3,000 species of Brazilian flora were pre-selected to be evaluated during the workshop. These species were chosen because they represent endemic taxa from Brazil, not officially assessed for extinction risk and which, according to the methods adopted for rapid detection of extinction risk, are classified as potentially Least Concern (LC) species, from the perspective of Criterion B (Geographical distribution measured from the Extent of Occurrence – EOO and/or Area of Occupancy [AOO]). These species have in common the fact that their EOO is greater than 30,000 km<sup>2</sup>, a reasonable volume and frequency of collections since the original description, more than 10 locations, were largely distributed throughout the country, often in more than one type of phytophysiology, and with records of collection carried out within the limits of fully protected Conservation Units. The Workshop had the virtual participation of Dr Domitila Raimondo – SANBI, providing a talk on South Africa's experience in achieving Goal 2 of the GSPC, and it was followed by a face-to-face presentation by Dr Eimear Nic Lughadha – RBG Kew, who addressed the topic 'New tools for scale

*Vellozia gigantea*, an Endangered (EN) species in Brazil's National Red List, used to be considered endemic to Espinhaço Mountain Range in Central Minas Gerais and recently collected at a disjunct site at Serra do Padre Angelo, Eastern Minas Gerais  
Photo: Gláucia Ferreira Crispim



A individual of *Galianthe souzae* E.L.Cabral and Bacigalupo (Rubiaceae) at Morro dos Cristais, Bom Sucesso do Itararé (SP), a Critically Endangered (CR) species endemic from the Devonian Escarpment grasslands  
Photo: Eduardo Fernandez

gain in detecting the risk of extinction of plant species'. In summary, the total number of target species detected as potentially LC for the workshop was 2,997; the total number of species sorted by the 12 groups was 1,839 (62%); the total of species categorized as LC was 931 and the total of species returned to the full flow of the conservation status assessment was 908.

#### Research activities

**T-005 Participate in analyses required to calculate STAR Metric for Threatened and Near Threatened Brazilian endemic plant species by 2022.** (KSR 5)

Number of research projects completed or supported by SSC members per taxonomic group and region: 1

Result description: The paper testing the STAR metric application with vascular plant species that had been assessed on national red lists is currently available at: <https://conbio.onlinelibrary.wiley.com/doi/10.1111/cobi.14046>. The study utilised data from Brazil, South Africa, and Norway to identify opportunities to reduce the extinction risk of plant species. The work was a collaboration among international scientists and conservationists, led by Newcastle University. The commonality across all three countries was the considerable threat that agricultural activities pose to plant species. In Brazil, the extinction risk of the 2,791 endemic plant species included in the study could be reduced by 29% through tackling the threat from agricultural activities; also, mitigating the threat from urban expansion could reduce species extinction risk by 21%, while mitigating the threat from fires, which are driven by climate change and deforestation, which could reduce extinction risk by a further 10%. The STAR metric applied in this study provides a tool to allow local and national decision-makers to assess their potential contribution to the global reduction of species extinction risk, allowing them to engage in international conservation policy processes through the lens of their national



Fieldwork team at Morro dos Cristais, Bom Sucesso do Itararé county (SP), performing population survey of *Galianthe souzae* (CR), a threatened species deeply affected by *Pinus* spp. invasion of its narrow habitat (high-altitude grasslands)  
Photo: Eduardo Fernandez



context. Such analyses will be critical to support species conservation in the post-2020 Global Biodiversity Framework.

**T-014 Conduct scientific expeditions to designated areas for the implementation of Territorial Action Plans for threatened flora conservation.** (KSR 5)

Number of threatened/Near Threatened species documented and/or rediscovered: 15

Result description: Between January 2022 and February 2023, the IUCN SSC BP-RLA/CNCFlora/JBRJ team conducted three scientific expeditions aiming to gather botanical material of threatened and/or poorly known/DD plant species. The expeditions were conducted within the scope of the 'GEF Pro Species: all against extinction' Project and has as its final goal to gather primary geographic and demographic data of the foci species in order to assess/reassess their conservation status. Thus, IUCN SSC BP-RLA/CNCFlora/JBRJ carries out expeditions to areas designated for the elaboration and implementation of conservation actions, with the objective of collecting updated information on endemic Threatened species in need of conservation interventions. In total, the team spent over 45 days in fieldwork, a much-necessary activity in a megadiverse, insufficiently explored botanically country such as Brazil. From March 28<sup>th</sup> to April 11<sup>th</sup>, 2022, an expedition for the collection of botanical material in the region contemplated by the Territorial Action Plan for the Conservation of Endangered Species of Espinhaço Mineiro territory - PAT Espinhaço Mineiro was carried out and took place in the northern region of Minas Gerais. Collections were performed in the State Parks of Botumirim, Caminhos dos Gerais and Serra Nova and Talhado, as well as in several places located outside formally designated protected areas. Seven Threatened species were collected during this effort, of which four species are categorized as EN (*Ditassa*

*cordeiroana*, *Maschalostachys markgrafii*, *Chamaecrista phyllostachya* and *Trembleya hatschbachii*) and three species as VU (*Cipocereus minensis*, *Proteopsis argentea* and *Paliavana werdermannii*). It is worth noting that a Melastomataceae (*Lavoisiera confertiflora*) was recorded for the first time in the north of the state of Minas Gerais. In total, 1,001 botanical samples were collected, included in the Rio de Janeiro Botanic Garden's herbarium (RB), and their respective duplicates were sent to different herbaria from Brazil and abroad. In May 2022, another expedition was conducted to the region comprised by the Rupestrian Fields of Eastern Minas Gerais state (Serra do Padre Angelo/Pico da Aliança and Sete Salões State Park), Southeast Brazil. Several nationally/globally Threatened species were documented, including the iconic *Drosera magnifica* (CR), *Eremanthus ovatifolius* (CR), *Schlumbergera kautskyi* (EN), *Vellozia gigantea* (EN), *Psychotria paludosa* (EN), *Bradea anomala* (EN), *Cololobus rupestris* (EN), *Baccharis lychnophora* (VU), *Chionolaena lychnophorioides* (VU), *Tillandsia heubergeri* (VU) and *Peperomia cordigera* (VU). Also in the context of GEF Pro Species project, in partnership with local teams from São Paulo, Paraná and Santa Catarina States, another expedition was conducted between the 2<sup>nd</sup> and the 16<sup>th</sup> of February 2023; this expedition targeted areas within the Territorial Action Plan for the Conservation of Endangered Species – PAT Caminhos das Tropas, a vast region between São Paulo and Paraná States where several Critically Endangered (CR) species were documented in the past, is still poorly explored by botanists, and is being severely mischaracterised due to increasing human activities in the region. The expedition lasted 15 days and involved ten technicians from partner institutions of IUCN SCC BP-RLA/CNCFlora/JBRJ, such as the Laboratory of Dendrology and Flora Conservation from the Federal University of Paraná (UFPR), Municipal Botanical Museum of Curitiba and Sociedade

Chauá, as well as the State Environmental Secretary. The trip covered nine municipalities (Itararé, Bom Sucesso do Itararé, Barra do Chapéu, Ribeira, Sengés, Jaguariáiva, Ponta Grossa, Palmeira and Lapa) and protected areas (State Parks of Vila Velha, of Cerrado, of Vale do Codó; of Monge; and the private protected areas RPPN of Mata do Urú, Meia Lua and Caminho das Tropas). The expedition found the Critically Endangered (CR) *Serjania hatschbachii*, a type of woody vine that has not been registered for almost 30 years (the last record was done back in 1995), and the CR species *Galianthe souzae* and *Mimosa strobiliflora*. Of the nine target species chosen as the focus of the expedition, these three were found and another is still under investigation since this depends on laboratory research. A total of 268 species from at least 35 botanical families were also collected during the fieldwork, including many potentially new and Threatened taxa.

**PLAN**

**Planning**

**T-007 Develop at least seven Conservation Action Plans for strategic territories to advance plant conservation in the country by 2025.** (KSR 8)

Number of conservation plans/strategies developed: 0

Result description: Throughout 2022, the BP-RLA Conservation Planning Unit coordinated the virtual workshops for the preparation of the National Action Plan for the Conservation of Threatened Flora in the Alto Tocantins Basin - PAN Alto Tocantins Basin, which included 98 target species, and the National Action Plan for the Conservation of Endangered Trees in Southern Bahia - PAN Hileia Baiana, including 221 target species. Both Action Plans are being prepared for publication in 2023. We are also engaged in supporting the State Environment agencies within the scope of the 'Project GEF Pro Species: all against extinction' (<https://prospecies.eco.br/>) in the elaboration of



Botanical expedition to the Campos Rupestres and Cerrado in Serra Nova e Talhado State Park, north of Minas Gerais  
Photo: Marcio Verdi

species conservation plans at the regional level, called here in Brazil Territorial Action Plans for the Conservation of Endangered Species (PAT in Portuguese). Thus, we supported the realization of workshops for the elaboration of the Territorial Action Plan for the Conservation of Endangered Species of the Cinturão Verde de São Paulo – PAT Cinturão Verde de São Paulo in the state of São Paulo, Territorial Action Plan for the Conservation of Endangered Species of the Veredas Goyaz-Geraes – PAT Veredas Goyaz-Geraes in the states of Goiás and Minas Gerais, both with publication scheduled for 2023.

## ACT

### Conservation actions

**T-023 Support the preparation and publication of lists of vascular plants in Protected Areas in Brazil, assisting in decision-making.** (KSR 10)

Number of areas under management for the species or group of species: 1

Result description: One of the conservation actions of the National Action Plan for the Conservation of Endemic Flora threatened with extinction in the State of Rio de Janeiro (PAN Endêmicas do Rio) is to provide state environmental agencies with information about the endemic and threatened flora of their Protected Areas. As a partial outcome, we produced the List of Plant Species of Pedra Selada State Park (PEPS in Portuguese), in Rio de Janeiro. PEPS is a Protect Area located in the Serra da Mantiqueira, in the municipalities of Resende and Itatiaia, and is part of the Mantiqueira Mosaic of Protected Areas. The survey indicated 303 species belonging to 81 families in the groups Angiosperms,

Gymnosperms, Ferns, and Lycophytes. Eight of these species are classified as threatened, three in the VU (Vulnerable) category and five in the EN (Endangered) category. There is also one species — *Voyria apphylla* (Jaq.) Pers. — categorized as DD (Data deficient). All specimens were deposited in the RB herbarium, of the Botanical Garden of Rio de Janeiro. The list ([https://catalogo-uics-brasil.jbrj.gov.br/descr\\_areas.php?area=PedraSelada](https://catalogo-uics-brasil.jbrj.gov.br/descr_areas.php?area=PedraSelada)) is available in the Catalogue of Plants of Brazil's Protected Areas, a tool developed to meet the fundamental need for knowledge and access to information about the biodiversity protected by Brazil's Protected Areas.

### Technical advice

**T-021 Provide scientific advice and information for the identification and conservation of species of concern in national and international contexts.** (KSR 10)

Number of technical consultations provided to support conservation actions: 3

Result description: The IUCN SSC BP-RLA/CNCFlora/JBRJ team contributed in 2022 with the provision of technical and scientific data related to the extinction risk and conservation status of plant species subject to the regulations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES. We have provided technical advice on the conservation status and extinction risk of (1) *Handroanthus* spp., including *H. ser-ratifolius*, which is considered the world's most valuable timber and is currently not effectively protected in-country, in particular, the Amazon subpopulations; (2) *Paubrasilia echinata*, the Brazilwood, which is a species of great economic importance with a history of more than 500 years of exploitation and currently facing intense

decline in habitat quality, EOO, AOO and in the number of subpopulations due to illegal extraction of wood for making violin bows; and (3) *Dypterix* spp., the Cumaru Nut Trees, which, despite the lack of information about the extinction risk for about 80% of the described species in the national territory, may become threatened due to the maintenance or expansion of the selective exploration process.

**T-022 Support the implementation of conservation actions of at least seven Conservation Action Plans for strategic territories to advance plant conservation in Brazil.** (KSR 10)

Number of technical consultations provided to support conservation actions: 8

Result description: Throughout 2022 we provide technical support and consulting for state environmental agencies to implement and monitor Territorial Action Plans for the Conservation of Endangered Species (PAT in Portuguese). As part of the 'GEF Pro-Species Project: all against extinction' (<https://prospecies.eco.br/>), several workshops and meetings have been organized for this purpose. As a result, we formally support the implementation and monitoring of the Territorial Action Plan for the Conservation of Endangered Species in the Territory Espinhaço Mineiro (PAT Espinhaço Mineiro) in the state of Minas Gerais; Territorial Action Plan for the Conservation of Endangered Species in the Territory of Chapada Diamantina-Serra da Jiboia (PAT Chapada Diamantina-Serra da Jiboia) in the state of Bahia; Territorial Action Plan for the Conservation of Endangered Species in the Meio Norte Territory (PAT Meio Norte) in the states of Pará, Tocantins and Maranhão. We technically support other PATs in a 'GEF

The Critically Endangered (national Red List) *Ilex auricola* S. Andrews (Aquifoliaceae) rediscovered at its type-locality at Morro do Ouro, Barra da Estiva county, Bahia  
Photo: Gláucia Ferreira Crispim



Pro-Species Project' when requested, for example, Territorial Action Plan for the Conservation of Endangered Species of the Cerrado Tocantins Territory (PAT Cerrado Tocantins) in the state of Tocantins; Territorial Action Plan for the Conservation of Endangered Species in the Capixaba-Gerais Territory (PAT Capixaba-Gerais) in the states of Espírito Santos and Minas Gerais; Territorial Action Plan for the Conservation of Endangered Species in the Caminho das Tropas Paraná São Paulo Territory (PAT Caminho das Tropas Paraná São Paulo) in the states of Paraná and São Paulo and Territorial Action Plan for the Conservation of Endangered Species in the Xingu Territory (PAT Xingu) in the state of Pará. Lastly, we also support and implement actions of the National Action Plan for the Conservation of Endemic Flora threatened with extinction in the State of Rio de Janeiro (PAN Endêmicas do Rio), PAN created and implemented by the partnership between the State Secretary of Environment and the Research Institute of the Botanical Gardens of Rio de Janeiro.

## NETWORK

### Capacity building

**T-002 Train four Red List assessors as trainers by the end of 2025 (two members by 2022 and a further two by 2025).** (KSR 2)

Number of people trained in assessment tools: 0

Result description: No new member of the BP-RLA/CNCFlora/JBRJ was designated IUCN Red List Trainer in 2022; however, there are two candidates who are being prepared to join the Trainer's Course in 2023, which will increase to four the number of IUCN Red List Trainers in the group.

**T-003 Train four members of the BP-RLA Conservation Planning Unit in Conservation Planning Tools by 2025.** (KSR 2)

Number of people trained in conservation planning: 4

Result description: By the end of 2022, four members of the IUCN SSC BP-RLA/CNCFlora/JBRJ Conservation Planning Unit had completed the online course on Facilitating Species Conservation Planning Workshops from the IUCN SSC Conservation Planning Specialist Group (CPSG). This target will be continually updated, as new members will be joining the capacity-building agenda of IUCN SSC BP-RLA/CNCFlora/JBRJ.

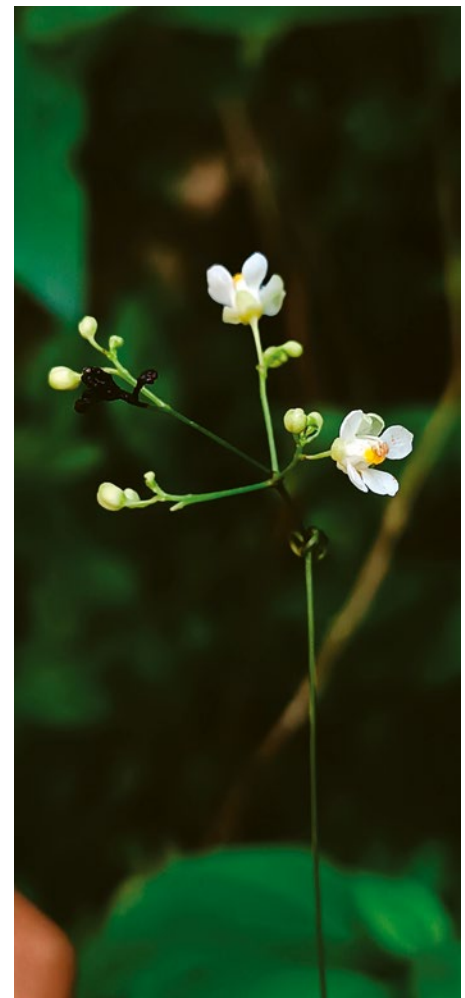
**T-008 Translate the official IUCN Red List online training course and all its associated materials (guidelines, classification schemes, mapping standards) into Portuguese.** (KSR 4)

Number of guidance documents and modules from the IUCN Red List training course translated into Portuguese: 21

Result description: In order to minimize impacts on endangered species, especially on those that are not covered by existing conservation instruments, the Ministry of the Environment, in collaboration with its related authorities and partner organizations, is implementing the National Strategy for the Conservation of Threatened Species, which seeks to allocate resources in prevention, conservation, handling, and management actions that may reduce the risk of extinction of the Brazilian biodiversity. The Pró-Species Project, coordinated by the Federal Government through the Ministry of the Environment (MMA) and financed by the Global Environment Facility – GEF ([www.thegef.org](http://www.thegef.org)) have, among its objectives, the need to democratize the understanding of the IUCN Red List methodology, and thus, seek its correct application at different levels and scopes through the provision of training for those environmental agencies willing to produce their regional Red Lists. To do it broadly at the national level, guaranteeing the dissemination and standardisation in the application of the methods to conduct species' conservation assessments in Brazil, all guiding documents and classification schemes related to *The IUCN Red List*

*of Threatened Species* were translated into Portuguese during 2021/2022. Translated documents include the *Guidelines for IUCN Red List Categories and Criteria - Version 14* (<https://www.iucnredlist.org/resources/redlistguidelines/>); the *Guidelines for Application of IUCN Red List Criteria at Regional and National Levels - Version 4.0*, and the Online IUCN Red Listing Training course, with its seven modules ('Assessing Species' Extinction Risk Using IUCN Red List Methodology'), which took place within the scope of the project 'An integrative approach for advancing biodiversity conservation of threatened species of the Brazilian Cerrado', financed with resources from the Critical Ecosystem Partnership Fund (CEPF), in a partnership between CSE Brazil, IUCN SSC BP-RLA/CNCFlora/JBRJ and ICMBio. Additionally, the following documents were also translated to Portuguese and will be made publicly available during 2023: (1) *The IUCN Red List Categories and Criteria - Version 3.1*; (2) Mapping Standards and Data Quality for the IUCN Red List Spatial Data; (3) Standard consistency - Documentation Standards And Consistency Checks For IUCN Red List Assessments And Species Accounts; (4) Threats Classification Scheme v.3.2; (5) Stresses Classification Scheme v.1.1; (6) Habitats Classification Scheme v.3.1; (7) Conservation Actions in Place Classification Scheme v.2.0; (8) Conservation Actions Needed Classification Scheme v.2.0; (9) Research Needed Classification Scheme v.1.0; (10) General Use and Trade Classification Scheme (including the Non-Consumptive Use scheme) v.1.0.; (11) Livelihoods Classification Scheme v.2.0; (12) Plant and Fungal Growth Forms Classification Scheme, v.1.1; (13) Required Information - Required and Recommended Supporting Information for IUCN Red List Assessments; (14) Worksheets related to calculation of population reduction under IUCN Red List Criteria A1; (15) Worksheet Calculating Generation Length; (16) EOO Tool Instructions; (17) Freshwater Species Mapping Standards for IUCN Red List

The Critically Endangered (CR) *Serjania hatschbachii* Ferrucci (Sapindaceae), a type of woody vine that has not been documented since 1995. The researchers found less than 15 mature individuals of the species at its type locality  
Photo: Gláucia Ferreira Crispim



Assessments; (18) SIS version 2.0 Manual – July 2014 – Plants. These comprised over 240 pages and over 20 guiding documents and classification schemes. These translations will be important in the application of the Red List methods by the States of the Federation, and also in the context of the Red List training agenda offered to the States through the GEF Pro Species: all against extinction project and IUCN SSC BP-RLA/CNCFlora/JBRJ & ICMBio.

#### Membership

**T-010 Recruit at least 20 new members from distinct backgrounds and as diverse as possible in terms of geographic representation and gender to compose the Stand Alone BP-RLA by 2023.** (KSR 2)

Number of SSC members recruited: 26

Result description: The IUCN SSC BP-RLA/CNCFlora/JBRJ keep increasing its broad network of collaborators to perform red list assessments and develop/implement tailored conservation actions towards the protection of Threatened plant species. From 2021 to 2022, we have re-invited all 40 members of the group, who are all already formally assigned as members of IUCN SSC BP-RLA/CNCFlora/JBRJ; additionally, 16 direct conservation analysts working with red listing (e.g. professionals working with the application of red list methodology) as well as conservation planning directed linked to IUCN SSC BP-RLA/CNCFlora/JBRJ sum up to the total tally of collaborators the IUCN SSC BP-RLA/CNCFlora/JBRJ aggregated during the past year. This target will be continually updated, as new members are constantly joining the group.

#### COMMUNICATE

##### Communication

**T-015 Publish social media releases related to the work developed by CNCFlora/Rio de Janeiro Botanical Garden Research Institute (JBRJ).** (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 45

Result description: Throughout the year 2022, the BP-RLA published in its social media 45 posts related to the dissemination of plant diversity and conservation in Brazil (<https://www.instagram.com/jbrj.cncflora/>). We highlight the conservation campaign “Jacuçara”, composition of two vernacular names: Juçara — the Endangered palm tree *Euterpe edulis* Mart (Arecaceae), and one of its fruit dispersers, Jacutinga, the Endangered bird *Aburria jacutinga* (Cuculidae), which alone occupied 18 posts published simultaneously and in collaboration by the 10 institutions involved (<https://www.oama.eco.br/jacucara>). We have used social media to gather photographic records of the target species of the *National Action Plan for the Conservation of Endangered Trees in Southern Bahia* (PAN Hileia Baiana in Portuguese) and *National Action Plan for the Conservation of Endangered Flora in the Upper Tocantins Basin* (PAN Bacia do Alto Tocantins). This type of content has been useful to compose the supplementary material for the workshops. The field expeditions to the regions of Chapada Diamantina (Bahia state) and Serra do Espinhaço (Minas Gerais state) also gained important space on social media. Also, publications in peer-reviewed journals, technical reports, and Action Plan newsletters were disseminated.

**T-018 Contribute to the production of technical and scientific publications related to plant research and conservation.** (KSR 13)

Number of scientific publications: 2

Result description: BP-RLA members have collaborated on some scientific and outreach publications. The promotional article ‘Faveiro-de-Wilson: the hidden treasure of Minas Gerais, Brazil’ won the cover of the special edition 16.3 of *Current Conservation* magazine and versions in English (print) and Portuguese (digital), available at: <https://www.currentconservation.org/faveiro-de-wilson-the-hidden-treasure-of-minas-gerais-brazil/>. The article published in the scientific journal *Perspectives in Ecology and Conservation* highlights a participatory

approach to mapping strategic areas for the implementation of conservation and restoration actions. The article is the result of the work carried out by the group of researchers for the implementation of the conservation action foreseen in the *Territorial Action Plan for the Conservation of Endangered Species in the Territory of Chapada Diamantina-Serra da Jiboia* (PAT Chapada Diamantina-Serra da Jiboia) in the state of Bahia, within the scope of the Pró-Espécies Project: all against extinction, available at: <https://doi.org/10.1016/j.pecon.2022.11.001>.

**T-019 Publish at least three newsletters annually on plant conservation.** (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 2

Result description: The *Conservation Action Plan for Threatened Faveiros Species (Dimorphandra Schott) - PAN Faveiros*, had its first issue of the newsletter published. The newsletter provides a history of the PAN, from the creation of the first PAN Faveiro-de-Wilson, in 2015, to its conclusion and the elaboration of the new PAN Faveiros, which also includes the faveiro-da-mata, under the CEPF Project ‘Together for Cerrado species’. The main actors of the PAN Faveiros, the actions taken so far, the next steps and

opportunities for obtaining resources are also presented. The digital version of the newsletter is available at <https://mailchi.mp/78f7a866f513/pan-faveiros-bole-tim-informativo-n-1-ano-11616238>. In the second issue of the PAN Faveiros newsletter, advances in the implementation of conservation, research, and outreach actions are highlighted. The dissemination of information about the history and conservation efforts of faveiro-de-wilson in international magazines and webinars is noteworthy. The discovery of a faveiro-da-mata tree in the state of Rio de Janeiro is also highlighted, as well as the initiation of studies on hybridization and adaptation of faveiros to climate change. The digital version of the newsletter is available at <https://mailchi.mp/16f7afddc7ad/pan-faveiros-newsletter-n-2-ano-1>.

**T-024 Participate in scientific or public events (nationally and internationally).**  
(KSR 13)

Number of SSC members' presentations developed in relation to specific taxonomic groups: 3

Result description: In 2022, IUCN SSC BP-RLA/CNCFlora/JBRJ have been participating in scientific events both nationally and internationally, in order to communicate properly achievements, challenges, and outcomes of our plant conservation work. In June 2022, Eduardo Fernandez presented the lecture entitled 'State of the art, challenges and perspectives in the process of assessing the extinction risk of the Brazilian flora' at the I Workshop New Strategies for the Achievement of Target 2 of the GSPC in Brazil; additionally, the talk 'Endangered flora and conservation actions in Brazil – the case of vascular epiphytes' was delivered by the Co-Chair at the II Epiphyte Symposium 'Conservation Experiences in America'. Further on, IUCN SSC BP-RLA/CNCFlora/JBRJ team members shared their field experience looking for threatened and poorly known plant species in Brazil through the lecture 'Not everything is flowers! Field expeditions

of the Brazilian National Centre for Flora Conservation – CNCFlora', at the 19th National Week of Science and Technology (SNCT), held by JBRJ. Eduardo Fernandez also delivered the talk entitled 'Towards a comprehensive conservation assessment of Brazilian trees' at the 7th Global Botanic Gardens Congress, and also shared part of his experience with a formally declared Extinct in the Wild (EW) tropical timber at the symposium BGCI's State of the World's Trees - What is Next?, with the lecture entitled 'Bringing the magnificent tropical timber Guarajuba Tree (*Terminalia acuminata*) back from the brink'. Marcio Verdi was invited to share the work being done in Brazil regarding plant conservation at the Plant Conservation Planning Webinar, organized by the IUCN SSC CSS Indianapolis Zoo in October (<https://youtu.be/8GniUM-libM8>). Marcio Verdi and Eduardo Amorim also gave a lecture on 'Species of Brazilian Flora Threatened with Extinction: State and Conservation Strategies' in the course 'Introduction to Biodiversity, Professional Graduate Program Biodiversity in Protected Areas' of the National School of Tropical Botany at the Rio de Janeiro Botanical Garden Research Institute.

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Brazil (CSS Brazil), Arboretum Program for Conservation and Restoration of Forest Diversity and Public Prosecutor's Office of the State of Bahia, Support Foundation for the Development of Scientific Computing (FACC), Brazilian Flora Group (BFG) REFLORA, Belo Horizonte Botanical Garden, Chico Mendes Institute for Biodiversity Conservation (ICMbio), several NGOs, for all the assistance and support provide. Their unwavering commitment to our cause is truly inspiring, and we feel honoured to have you as our partners in this important mission. We would also like to thank the significant contributions of Marcio Verdi, Focal Point for Conservation Planning and Project Coordinator of the Strategies Nucleus for Conservation of Threatened Flora at CNCFlora/JBRJ, who played a crucial role in coordinating the development and implementation of several National Action Plans, and together with his team contributed to the preparation of this report. CNCFlora/JBRJ look forward to continuing all the above-mentioned partnerships and working together towards a brighter future for our planet's precious biodiversity.

**Summary of achievements**

**Total number of targets 2021–2025:** 23

**Geographic regions:** 1 Global, 22 America

**Actions during 2022:**

- Assess: 7 (KSR 5, 6, 7)
- Plan: 1 (KSR 8)
- Act: 3 (KSR 10)
- Network: 4 (KSR 2, 4)
- Communicate: 4 (KSR 13)

**Overall achievement 2021–2025:**

