Rodriguésia 66(4): Epílogo. 2015 http://rodriguesia.jbrj.gov.br

DOI: 10.1590/2175-7860201566417



Epilogue

The huge impact of the publication of the Brazilian Catalogue of Plants and Fungi in 2010 spread further from the plant taxonomy arena, influencing the stability of nomenclature from biodiversity surveys to ecology and conservation research and also becoming the reference for plant names within other areas. The Lista de Espécies da Flora do Brasil (http://floradobrasil.jbrj.gov.br/), or Brazilian List, answers to the demand for plant species name certification coming from customs, policy making, legislation and above all, the scientists and general public. The species list became the reference for floristic and plant survey studies in Brazil and is currently used by ecologists, foresters, agronomists and geographers. Since 2010, the website has received over 1.5 million visits from half a million users hitting over 13 million pages, remaining in the site in average for 12 minutes. Herbarium curators and the users of plant collections who need to check plant names and their occurrence within Brazil can count on this list as their main place for consultation. Formerly dominant sites, such as Missouri Botanical Gardens (www.mobot.org) and International Plant Names Index (www.ipni.org) are nowadays secondary to the Brazilian List for researchers concerned with Brazilian plants.

The stabilization of nomenclature and provision of a taxonomic backbone has impacted positively towards the country's contribution for species conservation status assessments (GSPC Target 2) carried out by the Centro Nacional de Conservação da Flora/CNCFlora. The improved data quality has also positively impacted individual researchers and herbaria, since it provides a secure source for correct and accepted names.

Other consequence of the project was to bring evidence to poorly known regions where botanical collections are still needed in order to provide a more complete picture of the regional plant diversity. Increasing the knowledge about the species distribution area is important to develop a framework for Brazilian state floras and checklists.

The project has led to a resurgence of plant taxonomy as a worthwhile subject to be studied and consequent increase of the number of contributors from 416 in 2010 to 575 in 2015. The Brazilian government recognition of taxonomic activities was re-kindled by the whole process and the Reflora Programme was launched. This two pronged programme includes scholarships for Brazilian botanists to visit collections abroad (initially Royal Botanic Gardens, Kew/RBG Kew and the Museum Nationelle d'Histoire Naturelle, Paris/NHM Paris) and also funds, through the State Research Councils (FAPs) and the private sector, the repatriation of herbarium data and images to compose a virtual herbarium, Herbário Virtual Reflora (http://www.herbariovirtualreflora.jbrj.gov.br/). An unprecedented number of individual and collective bursaries have generated a high and varied output of scientific work based on historical botanical collections. Together with the images provided by the INCT - Herbario Virtual da Flora e dos Fungos, another government funded programme, the Brazilian List was populated by images of vouchers in due course.

While the Catalogue published in 2010 included fundamental features concerning accepted species, bibliographic reference, biome, distribution and endemism, and endeavoured to include a voucher specimen for each species and infraspecific taxon cited, it lacked a facility to include the images of the specimens listed. From March 2013 the Brazilian List on-line was migrated into the server of the Rio de Janeiro Botanical Gardens under the umbrella of the Reflora Project, alongside with the Virtual Herbarium Reflora, launched in September 2013. Amongst the new functionalities featured, it became possible to include the life-form, substrate and vegetation type. The rapid growth and linking of the virtual herbaria to the Brazilian List meant that images of vouchers (including type-specimens) could be added to the system, and researchers were also welcome to link images of plants in the field, making the list more user-friendly for non-botanists and for researchers based far away from the collections. Georeferenced herbarium records from the Reflora Virtual Herbarium and speciesLink Network (http://splink.cria.org.br) also helped to suggest possible new state records and refine the endemism category, but these are to be used cautiously as the data are not always accompanied by images and their determination might in some cases be inaccurate.

The final edition of the Brazilian List Project aims to mark this particular step in the process of recording the known Brazilian plant diversity prior to its transformation and upgrade into a new project, the Brazilian Flora Online 2020, aiming to describe and differentiate among the known species. Much work has been required to get to this point, but the fundamental shift in the involvement and focus demanded by large-scale floristic descriptive work imposes an intensification and concentration around several new issues, for instance:

- to design new functionalities to include descriptive and identification key data taking advantage of the widely successful basic Brazilian List framework;
- to create a system that makes it possible to compare between descriptions to indicate where information is lacking and when all the species of a given genus have been described;
- to gauge how many species a single researcher can describe in 4 years, considering that there are groups where monographs already exist, while the largest genera, such as Eugenia, Mimosa, Croton and Paepalanthus still lack in-depth studies to permit their differentiation beyond large species groups.

Such issues meant that a fundamental change in the authorship system had to be effected in order to provide a democratic, effective and meritorious system of attribution of responsibility and authorship, and to create a less top-heavy, more dynamic way for the contributors (including the provision of opportunities to new players) to add descriptions to the system. In order to achieve this objective, researchers bid individually or as research-groups to complete taxonomic plant groups comprising up to 300 species within a system that aims to adhere to strict deadlines.

The final numbers for the Brazilian List Project 2015 are shown below. It is an excellent moment to take stock and consider the difference made by the huge effort involved in holding an on-line updatable system to register plant biodiversity coordinating the work of 575 contributors and making it instantly available for the botanical community and public worldwide.

2015	Species total	Endemics	%
Fungi	5,712	124	2.2
Algae	4,747	197	4.1
Bryophytes	1,524	299	19.6
Ferns and Lycophytes	1,253	460	36.7
Gymnosperms	30 (23*)	2	8.7
Angiosperms	32,831 (32,026*)	18,421	57.5
Total	46,097	19,503	43,1

^{*}native species (endemism percentage calculated based on native species)

Daniela C. Zappi, Rafaela Campostrini Forzza, Vinicius Castro Souza, Vidal de Freitas Mansano e Marli Pires Morim

Acknowledgements:



















