OPEN AND COLLABORATIVE SCIENCE IN DEVELOPMENT NETWORK

The impact of Brazil's Virtual Herbarium in e-Science

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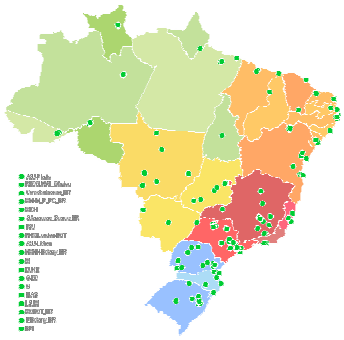
Project Goal & Key Objectives

Brazil's Virtual Herbarium (BVH) is currently integrating 175 datasets from herbaria that freely and openly share over 5 million records & 1 million images. A key objective is to identify drivers and outcomes of data sharing and open collaboration through BVH. A central research question in this first year was "Has data sharing through BVH led to more recognition and support for data providers?"



175 datasets of Plants & Fungi
At least one herbarium in every state of the country

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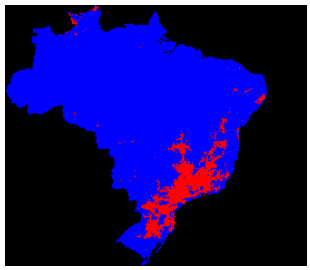
Research Approach & Methods

*First year target groups: **data providers** and **individual contributors***
***Data providers:** a questionnaire was sent out together with a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis to all herbaria curators. The answers were tabulated and analyzed, and the results were presented and discussed at an evaluation and strategic planning face-to-face meeting.*
***Individual contributors:** a questionnaire was sent out to all contributors of the annotation system and of the system for modeling species geographic distribution, BioGeo. Answers were analyzed and reports were submitted.*

Initial Findings

Resulting from a collaborative network (institutions and experts), BVH is a dynamic, enabling, and evolving e-infrastructure (data, tools and applications). The effort to share data openly and on-line is increasing the visibility of BVH associated herbaria (data providers), and is leading to greater institutional recognition and support at the local level. Data integration from university herbaria is increasing the importance of the e-infrastructure to graduate programs, and is leading to a greater number of expert visits and improvement of the herbaria holdings. Data sharing by small herbaria is increasing both geographic and taxonomic on-line knowledge and catalyzing the use by diverse communities from different geographic areas. As to the increased use of the annotation system tools and modeling workflows, key drivers were to contribute to the quality of the data used for research, the planning of new collecting efforts, and to support policies and strategies for informed decision making.



Lima, I.B. 2016 Chamaecrista choriophylla (v2) in Biogeografia da Flora e dos Fungos do Brasil. INCT Herbário Virtual (http://biogeo.inct.florabrasil.net/proc/17116).

Overcoming Challenges Faced

We were able to convince the Steering Committee to include a full day face-to-face discussion on the Strengths, Weaknesses, Opportunities, and Threats of BVH, presenting the results and analysis of the questionnaire and further debating the most important points of the SWOT analysis.

Next Steps

The next target group are the network users. This analysis will be made for the speciesLink network, of which BVH is part. In 2015, the speciesLink network openly shared 7.4 million records and over one million images. 1.1 million searches were carried out, and 3.6 billion records were retrieved. Of these, 481 million records were actually accessed. An assessment to identify who are the users and the major drivers of this e-infrastructure's usage will help to improve communication and plan further development of Brazil's Virtual Herbarium.