

Working beyond borders: supporting global creation of and engagement with scholarly information

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

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Herbarium data



PLANTAE ACANTHACEAE

Aphelandra paulensis Wassh. **Isotype**. Det: Wasshausen, DC 1973
SP 40038 Coleta: Kuhlmann, M; Gehrt, A s.n. 16/03/1939.

Loc: Mata, Cunha, São Paulo, Brasil Cód. barras: SP000002.

Coord munic: [lat: -23.07 long: -44.96 err: ±38855 WGS84] Altitude: 1450m.

Notas: Arbusto, inflorescência com brácteas vermelhas e flores amarelas

Tipo de registro: espécime preservado

What, where,
when, by whom

Brazil's Virtual Herbarium

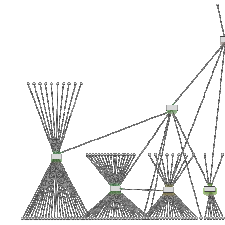
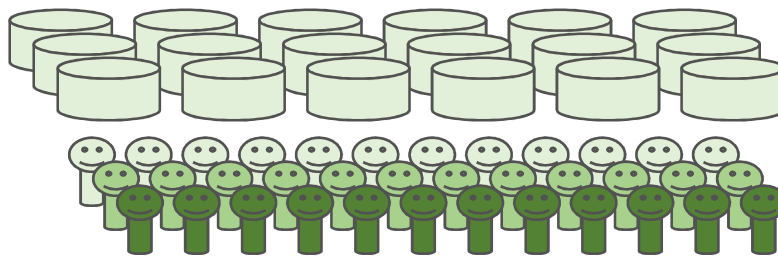


- species occurrence data
- Images (vouchers, live plants, pollen)
- maps, graphics, synthesis, catalogues (dynamic)

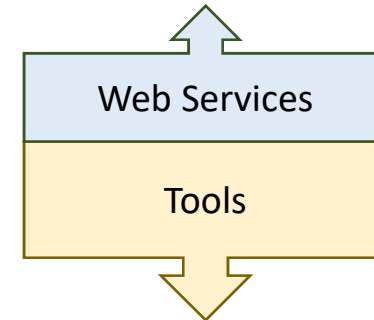
Search Interface

Virtual Herbarium of Flora and Fungi

- species occurrence data
- Images



- data
- images
- maps
- ecological niche modeling



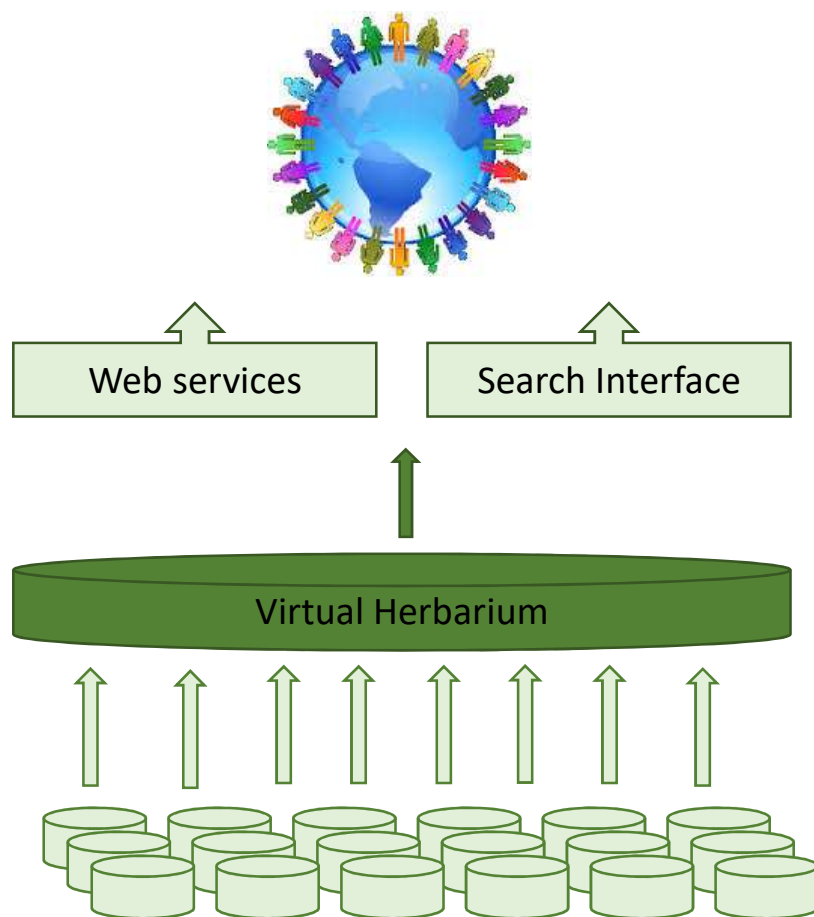
- data quality
- indicators
- usage

- Cybertaxonomy
- Annotation system
- Lacunas
- BioGeo

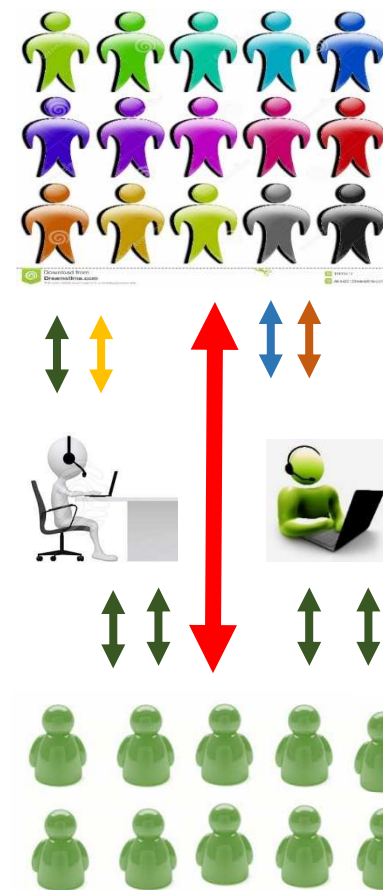
The importance of local e-Infrastructures



ICT Advancements



Social Network



Center of Innovation



Brazil's Virtual Herbarium



2008: 48 datasets

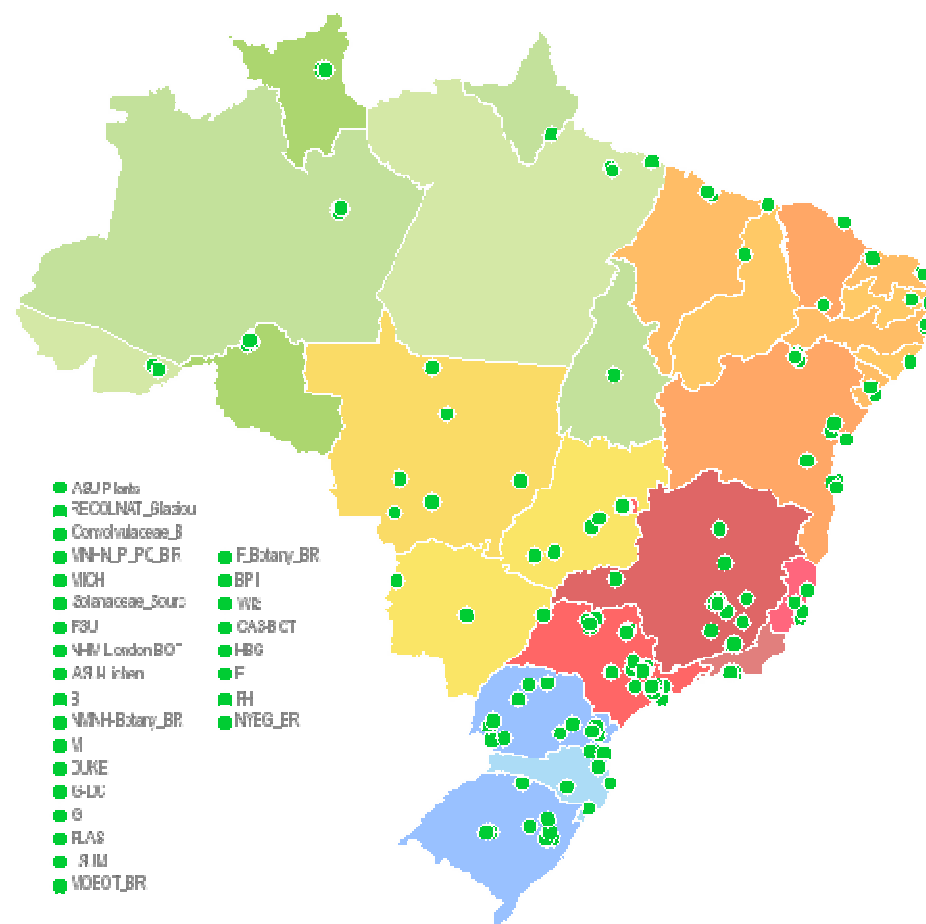
2 from abroad

1.9 million records

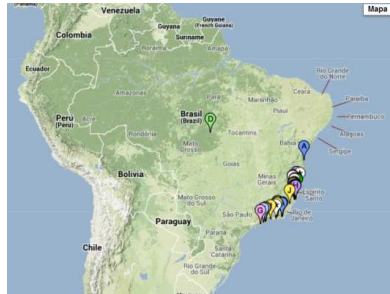
2016: 178 datasets

26 from abroad

5.1 million records



Search interface *speciesLink* (adding value)



Monimiaceae
Macrotorus utriculatus (Mart.) Perkins

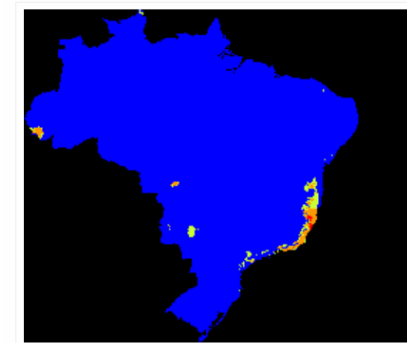
⚠️ Ameaçada de extinção Anexo I - MMA
 ⚠️ Vulnerável [C2A0] - Biodiversitas

Distribuição da espécie no Brasil - comparação entre a Lista do Brasil e rede *speciesLink*

UF	Lista do Brasil	speciesLink
AC		
AM		
AP		
PA		
RO		
RS		
TO		
AL		
BA		
CE		
MA		
PE		
PI		
RN		
SE		
DF		
GO		
MS		
MT		
MG	x	x
RJ	x	x
SP	x	x
PR		
SC		
RS		

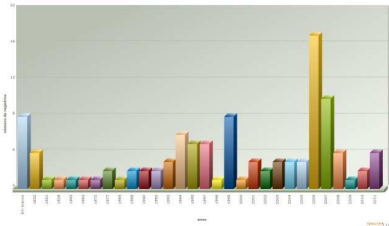
download: mapa / pontos / modelo

Como citar: Lirio, E.J. 2013 *Macrotorus utriculatus* (v1) in *Biogeografia da Flora e dos Fungos do Brasil*. INCT Herbário Virtual (<http://biogeografia.inct.florabrasil.net/proc/8566>).



download: mapa / pontos / modelo

Como citar: Lirio, E.J. 2013 *Macrotorus utriculatus* (v1) in *Biogeografia da Flora e dos Fungos do Brasil*. INCT Herbário Virtual (<http://biogeografia.inct.florabrasil.net/proc/8566>).



PLANTAE MAGNOLIOPSIDA MONIMIACEAE

Macrotorus utriculatus Perkins. Det: Peixoto, A.L. **redlist**
UEC 173755 Col: Sanchez, M.; Pedroni, F.; Laps, R.R.; Belinello, R.; Pedroni, F.; Laps, R.R.; Belinello, R. 1773. Pinguaba, Morro do Corisco., Ubatuba, São Paulo, Brazil, **29/05/1997**. Cód. barras: UEC089629. Coord orig: [lat: -23.3025 long: -44.816944 WGS84]



outras informações associadas ao nome

Macrotorus utriculatus

in *Encyclopedia of Life*



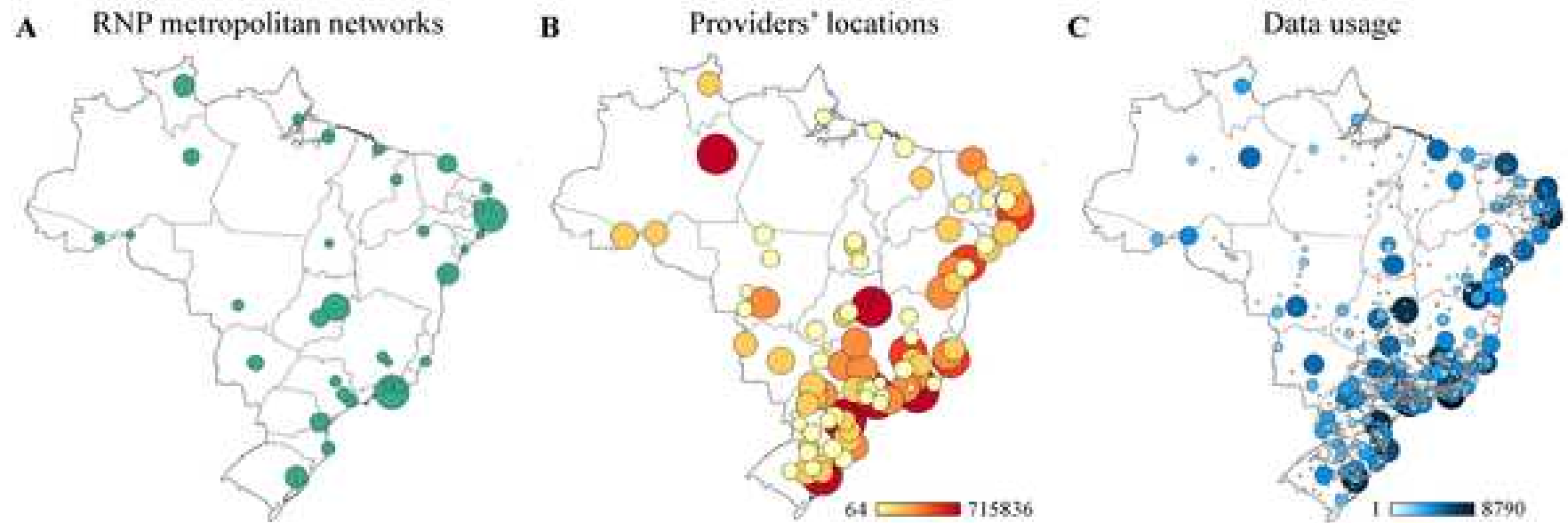
1. *Macrotorus utriculatus* Perkins; *Macrotorus utriculatus*

in *Biodiversity Heritage Library*



1. *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie*. Schweizerbart, v.25(1898), [1881]-2009.
2. *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie*. Schweizerbart [et.], v.25 (1898)
3. *Das Pflanzenreich* W. Engelmann, heft 4 (1901), 1900-1968.
4. *Just's botanischer jahresbericht*. Gebr. Borntraeger, Jahrg. 29, Abt. 2 (1901), 1874-98;

Research infrastructure and biodiversity data usage in Brazil (policy convergence)

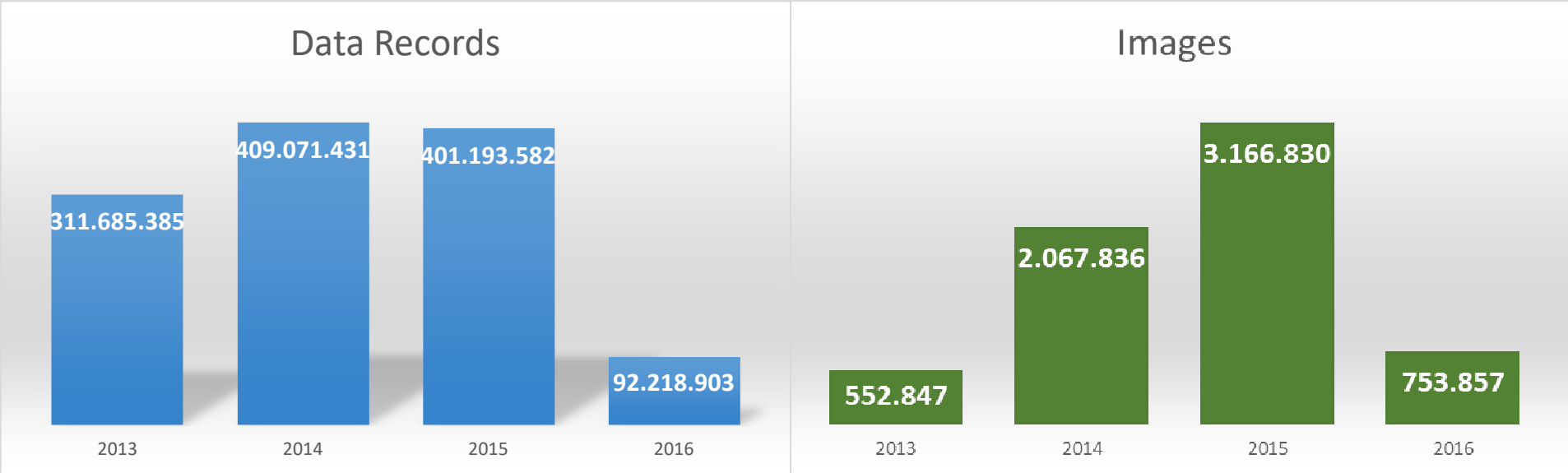


Canhos DAL, Sousa-Baena MS, de Souza S, Maia LC, Stehmann JR, et al. (2015) The Importance of Biodiversity E-infrastructures for Megadiverse Countries. *PLoS Biol* 13(7): e1002204.

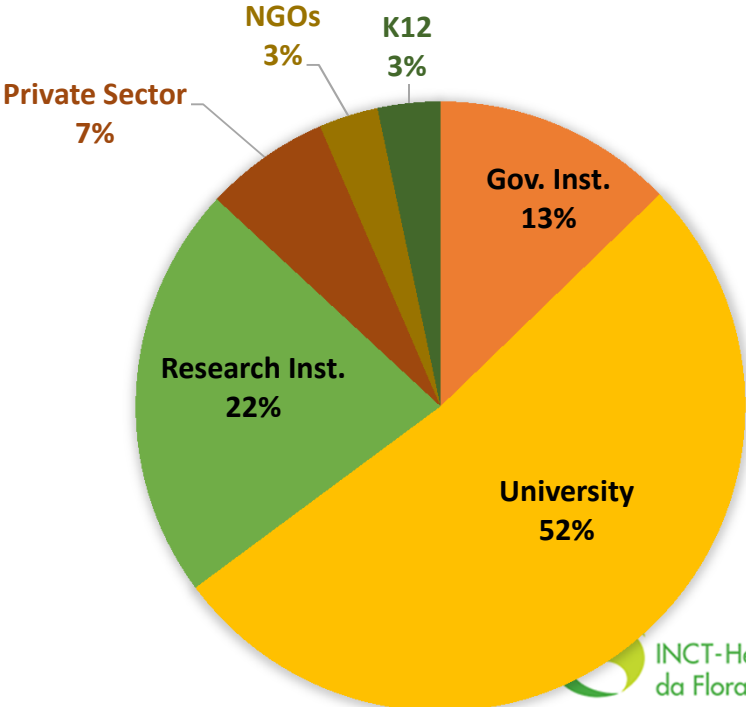
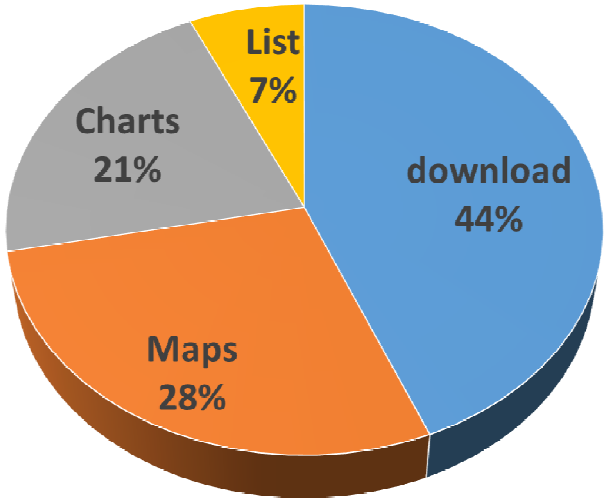
doi:10.1371/journal.pbio.1002204

<http://journals.plos.org/plosbiology/article?id=info:doi/10.1371/journal.pbio.1002204>

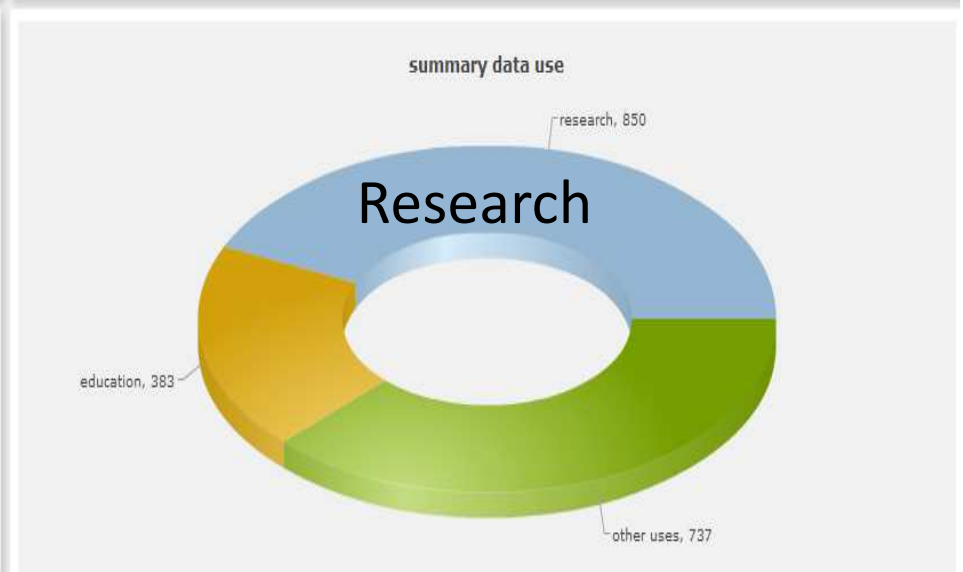
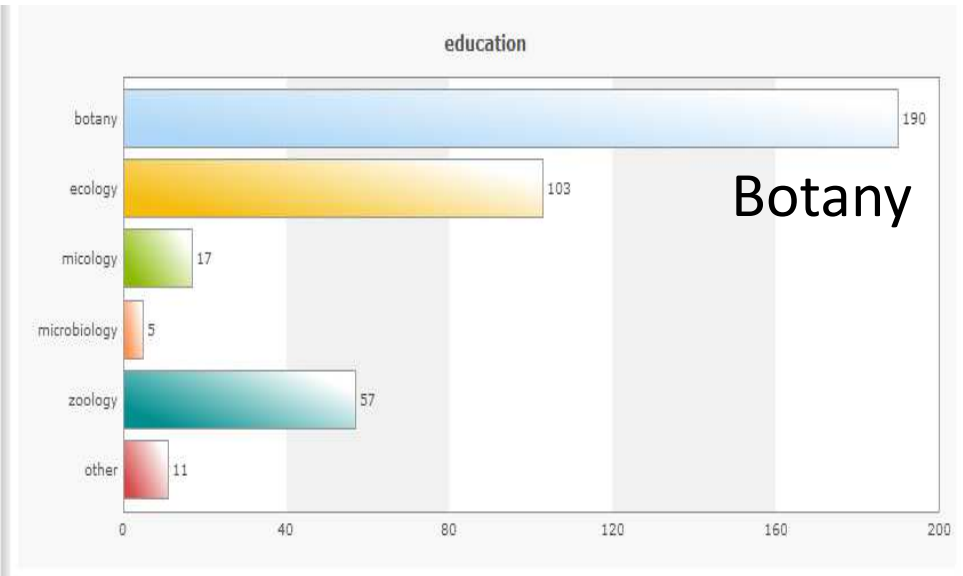
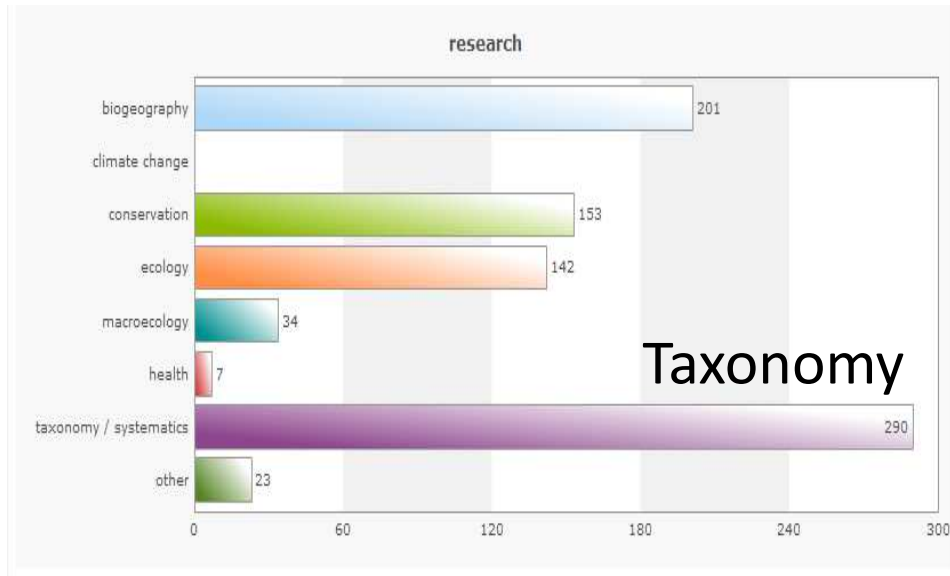
Usage



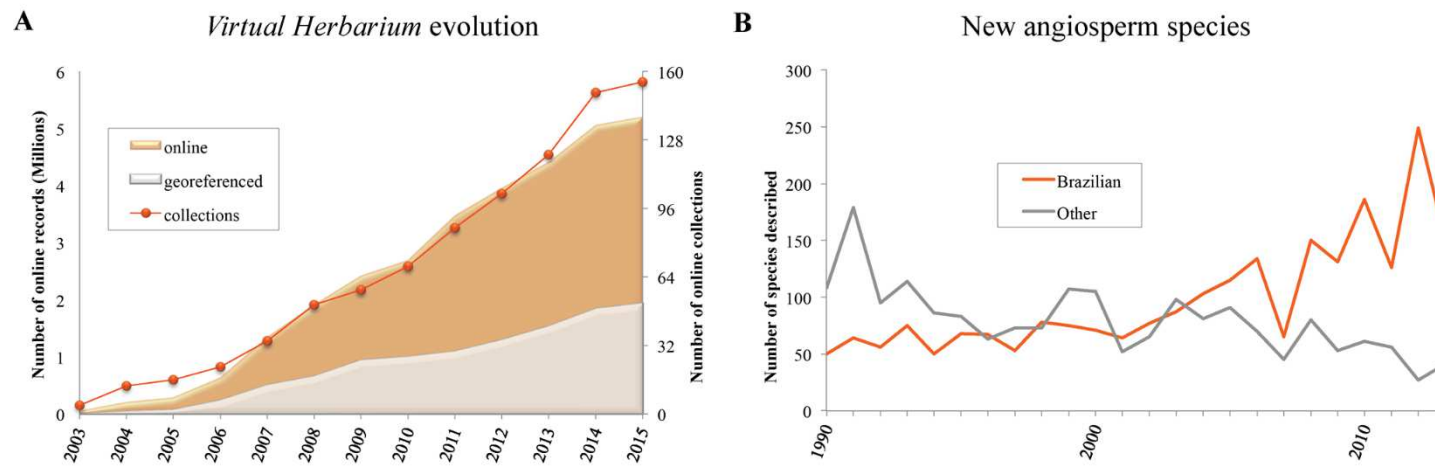
2015



Usage - <http://www.splink.org.br/dataUse?lang=en>



The evolution of Brazilian flora primary data available online and species described by Brazilian specialists.



Canhos DAL, Sousa-Baena MS, de Souza S, Maia LC, Stehmann JR, et al. (2015) The Importance of Biodiversity E-infrastructures for Megadiverse Countries. *PLoS Biol* 13(7): e1002204.

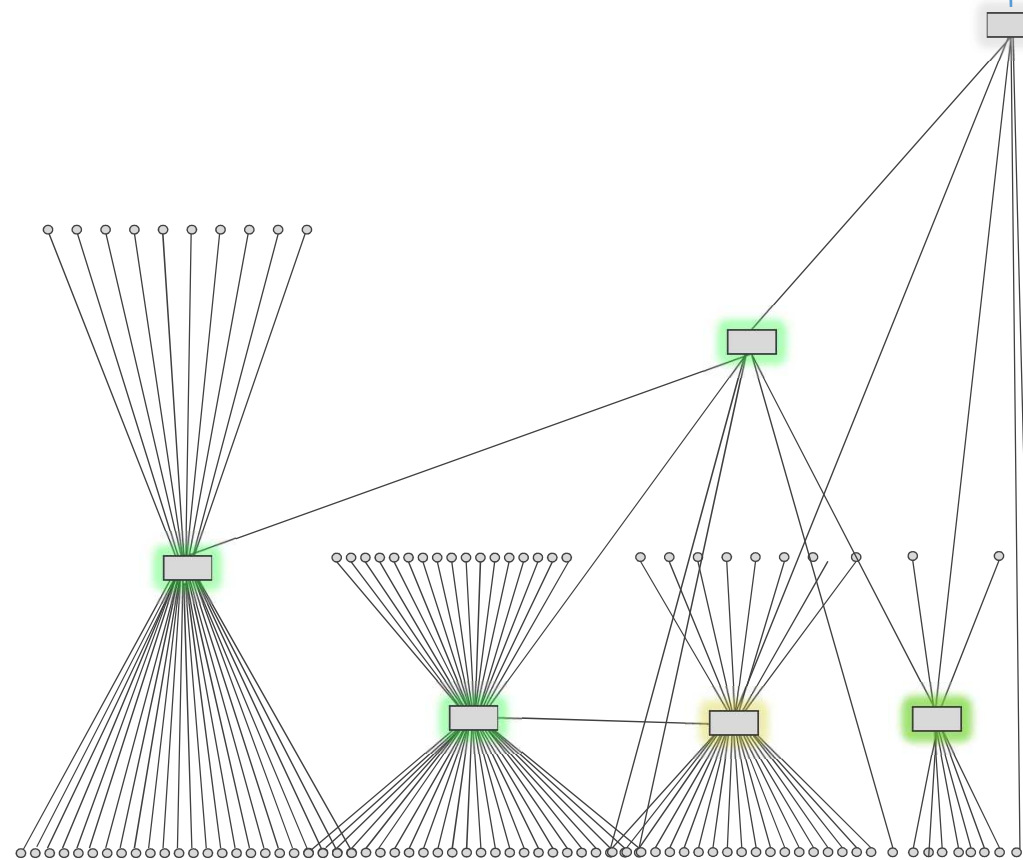
doi:10.1371/journal.pbio.1002204

<http://journals.plos.org/plosbiology/article?id=info:doi/10.1371/journal.pbio.1002204>

Challenges

- Large institutions resilient to change
- Making data useful and usable to other communities
- Governance of Virtual Institutes
- Sustainability of e-infrastructures: from project based grants to long-term support

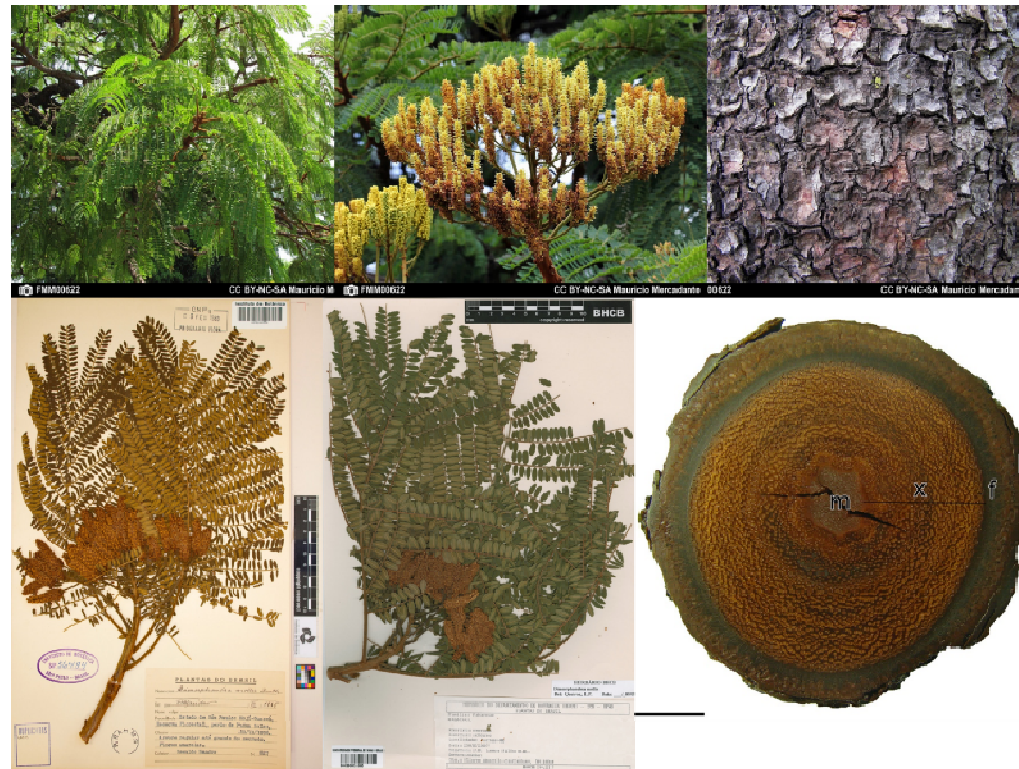
... paving the way to the future



Thank you!



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Dimorphandra mollis Benth. (speciesLink, 2016)