Why Isn't There Already a Single Herbarium Network?

A Single Symbiota-based Herbarium Network for the US colloquium

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Before

- Datasets were fractured
  (storage & project $$ was limited)
- Data standards were in flux
- Tools were fractured across independent projects
  (platform-specific, not user-friendly)

Good online resources for regional data (e.g., vPlants)

But tools couldn’t be shared across similar systems.

So new projects re-created tools & re-published data...
Now (in the last 4-ish years)

- Better mass storage solutions exist
- Data standards have settled
- Tools have settled and become more user-friendly
  - for mobilizing/publishing/accessing data (e.g., IPT)
  - for enhancing/cleaning/handling data (e.g., GeoLocate)

...But datasets remain disconnected.
Future - How do we break the cycle?

- **Data tools** need to be shared
- **Datasets** need to be connected
- **Funding** should consider the long-term

Connected data allows
more efficient use of standards & tools

...which saves money, and accelerates digitization.
Future - How do we break the cycle for Botany?

✓ Data tools need to be shared ··············· Symbiota toolset is reusable.

□ Datasets need to be connected ·········· VertNet connects data originally dispersed across collections.

✓ Funding should consider the long-term ··· ADBC funding for long-term permanence of natural history digital content

Connected data allows

more efficient use of standards & tools

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Future - How do we break the cycle?

- **Data tools** need to be shared ············ Symbiota

- **Datasets** need to be connected ········· VertNet

- **Funding** should consider the long-term ··· ADBC

Funding needs to focus on long-term support of

- **Data infrastructure** - to help institutions get their data out through existing networks (e.g., VertNet, Fossilworks, GBIF)

- **Staff** - Biodiversity informatics experts (iDigBio, GBIF, ^)

(still not often part of traditional IT or collections staff models)
Small-scale example of breaking the cycle:

Collections Management System at the Field Museum

Initially, it was funded & maintained via year-to-year projects

...Its structure & use were fractured between departments...

...Hard to support as data sources increased...

Modeling its funding & status after other essential institutional systems (e.g., finance & ticketing) was difficult but necessary.

...What are the practical steps to take next?
Small-scale example of breaking the cycle:

...What are the practical steps to take next?

VertNet & iDigBio networks are like a window on the solution - trying to long-term support infrastructure, but hamstrung by funding structure/model.

The tools are fine; focus on funding infrastructure...
How do we get from data to decisions?

Extract from a presentation by Lauren Weatherdon (UNEP-WCMC).
Credit: Scriberia, CC BY 4.0

from Wetzel et al., 2017
“EU BON Stakeholder Roundtable: Pathways to sustainability…”
Research Ideas & Outcomes 3: e11875.
https://doi.org/10.3897/rio.3.e11875

...What are the practical steps to take next?
& An EU-scale (?) example of breaking the cycle:

[non-exhaustive, European] Biodiversity Informatics Landscape

from Bingham et al., 2017
https://doi.org/10.3897/rio.3.e14059

...What are the practical steps to take next?