Data Management Strategies for the Extended Specimen

Teresa J. Mayfield-Meyer  @Tjegelewicz

https://www.youtube.com/user/jegelewicz
The Extended Specimen

“the focus on digital and human infrastructure, rather than physical infrastructure, makes the magnitude of the effort required to build and sustain such a resource harder to comprehend”

Lendemer et al, 2020

https://doi.org/10.1093/biosci/biz140
Unlocking success in digital transformations

- McKinsey & Company | October 29, 2018 | Survey

Transformations are hard, digital ones are harder
Less than 16% of digital transformations succeed.

Digital transformations require cultural and behavioral changes
Involvement of key people = greater probability of success.

What key employees are involved in your collections data management decisions?

Who's key? Probably not you....

- Board
- CEO/Director
- IT Manager
- CFO
- CDO
- Museum Members
Everyone!

Tip
Give others a say in digitization adoption.

Photo: Sven Haakanson/Burke Museum

Photo: The Natural History Museum
The Extended Specimen supports the **MISSION** of the natural history museum.
ESN Suggested Reading #2

Your Museum Mission Statement

AAM Core Standards For Museums

➔ Steward of Resources Held in Public Trust
  Collections ARE the resource!

➔ Commitment to providing the public with physical and
  *intellectual access* to the museum and its resources
  A digital transformation of the collections catalog with *public access*
  is a huge step toward meeting this standard!

Is your museum’s collection data publicly accessible? Is your data linked to other public resources?

**NO**
- “NMMNH:Paleo:9049”
- “San Juan County”
- “Lyson et al. 2016”

**YES!**
- [https://en.wikipedia.org/wiki/San_Juan_County,_New_Mexico](https://en.wikipedia.org/wiki/San_Juan_County,_New_Mexico)
- [https://doi.org/10.1017/jpa.2016.47](https://doi.org/10.1017/jpa.2016.47)
Links with associated extended data....

https://en.wikipedia.org/wiki/Do%C3%B1a_Ana_County,_New_Mexico

Tip
Use existing information instead of:

- Dona Ana Co
- NM, Dona Ana
- Donna Anna
- Donya Ana

https://www.wikidata.org/wiki/Q112953

http://vocab.getty.edu/page/tgn/2001435
Links with associated extended data...
Links with associated extended data....
ESN Suggested reading #3

Wikidata Community Introduction

➔ Free, Collaborative, for Everyone

➔ What can be added?
  Clearly identifiable conceptual or material entities described using serious and publicly available references that include at least one valid link to a Wikimedia page or that fulfills a structural need.

https://www.wikidata.org/wiki/Wikidata:Introduction
Links with associated extended data...

https://species.wikimedia.org/wiki/Michotamia_aurata

**Michotamia aurata**

Familia: Asilidae
Genus: Michotamia
Species: *Michotamia aurata*

**Name**
- *Michotamia aurata* (Fabricius, 1794)

**Synonymy**
- *Asilus auratus* Fabricius, 1794 (original combination)

**References**
ESN Suggested reading #4

**Wikispecies Charter**

- Aimed at needs of scientific users
- Wikispecies is free, because life is in the public domain!

@Wikispecies

https://meta.wikimedia.org/wiki/Wikispecies
Meet Siobhan

A New Zealand citizen scientist with a fondness for weevils.

A keen wikipedian writing articles and uploading images of New Zealand species into Wikipedia.
Wikipedia's policies and guidelines are developed by the **community**...

Take it for a test drive

Go ahead, edit an article or start a new one, but expect to be challenged if you don’t provide appropriate references or try to market your collection or someone associated with it.

Active Collections/Active Collections Data
New models of active collection management demand new models of active database management.

Active Collections Data = Mission Driven Practice
Striving to make database systems more inclusive would maximize the investment of populating and sustaining them by making collections information more useful both internally and externally to the institution.

https://www.taylorfrancis.com/books/e/9781315145150/chapters/10.4324/9781315145150-18
Create databases that are more “culturally responsive”

- Use existing datasets
- Address needs of the community and target audiences
- Sharable results

It’s not that far fetched!

To take full advantage of the rich data content and broad relevance of the ESN, the interfaces need to be redesigned to both attract and facilitate use by a broader user base.
Trails of Association

Documents are strung together through hyperlinks; the trails sprout side trails; which could loop back to the start.
Thanks!

- Everyone who helped in developing the concept of the Extended Specimen Network
- Everyone at Arctos, where I have learned how a community of practice works!
- New Mexico Museum of Natural History and Science
- Thank YOU for participating!
**Reading (in order of appearance)**

- [The Extended Specimen Network: A Strategy to Enhance US Biodiversity Collections, Promote Research and Education](https://example.com) - Lendemer et al
- [Unlocking success in digital transformations](https://example.com) - McKinsey & Company
- [The Extended Specimen: Emerging Frontiers in Collections-Based Ornithological Research](https://example.com) - Michael S. Webster
- [Dinosaurs and Dioramas: Creating Natural History Exhibitions](https://example.com) - Chicone & A Kissel
- [AAM Core Standards For Museums](https://example.com) - AAM
- [Wikidata Introduction](https://example.com) - Wikimedia Foundation
- [Wikispecies Charter](https://example.com) – Wikimedia Foundation
- [Siobhan Leachman ORCiD Profile](https://example.com)
- [Active Collections](https://example.com) - Wood, Tisdale and Jones, eds.
- [On Trails: An Exploration](https://example.com) - Robert Moor