
Data Management Strategies for the Extended Specimen

Teresa J. Mayfield-Meyer

@Tjegelewicz

<https://www.youtube.com/user/jegelewicz>

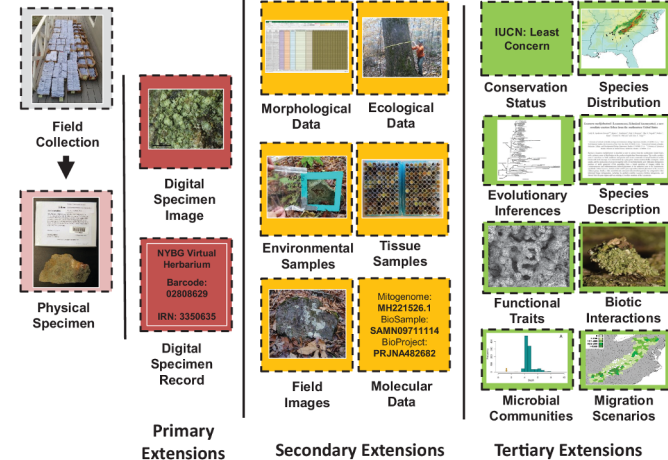
The Extended Specimen

“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>

Extended Specimens In Action: Appalachian Lichens





ESN Suggested Reading #1

Unlocking success in digital transformations

- McKinsey & Company | October 29, 2018 | Survey

→ **Transformations are hard, digital ones are harder**

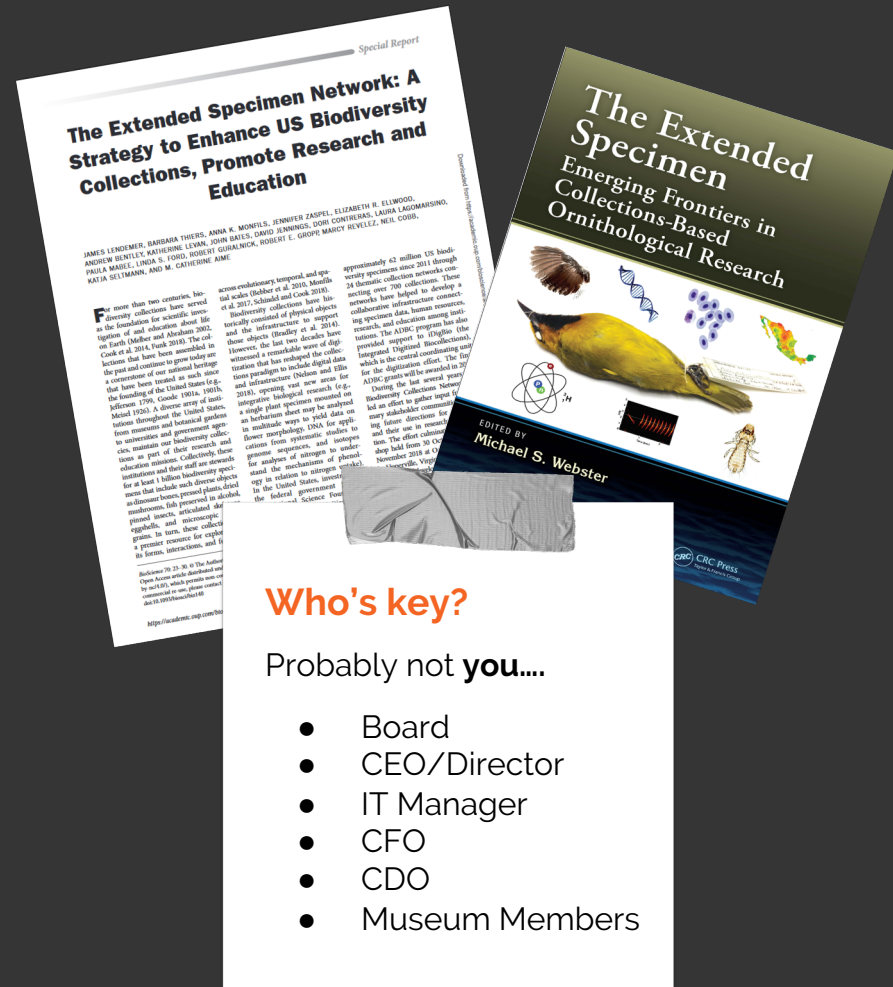
Less than 16% of digital transformations succeed.

→ **Digital transformations require cultural and behavioral changes**

Involvement of **key people** = greater probability of **success**.

- McKinsey & Co.

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



Everyone!



Photo: Sven Haakanson/Burke Museum

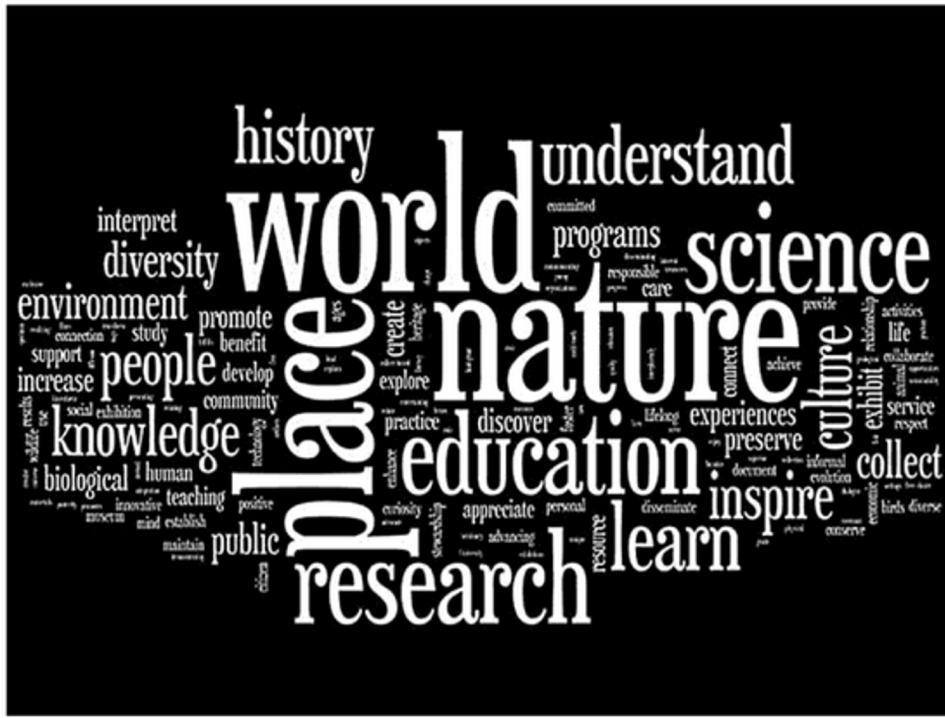
Tip

Give others a say
in digitization
adoption.



Photo: The Natural History Museum

The Extended Specimen
supports the
MISSION
of the natural history
museum.



Dinosaurs and Dioramas: Creating Natural History Exhibitions

By Sarah J Chicone, Richard A Kissel



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!

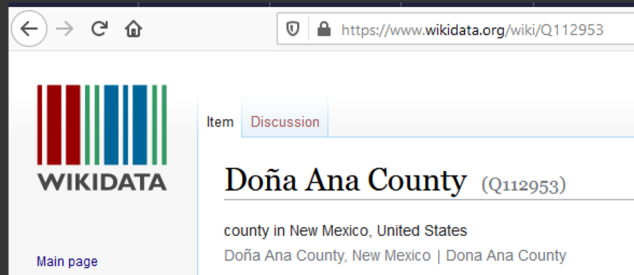
- <https://arctos.database.museum/guid/NMMNH:Paleo:9049>
- https://en.wikipedia.org/wiki/San_Juan_County,_New_Mexico
- <https://doi.org/10.1017/jpa.2016.47>

Links with associated extended data....

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



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



Tip
Use existing
information
instead of:

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



<http://vocab.getty.edu/page/tgn/2001435>

Links with associated extended data....

← → ↺ 🏠 https://en.wikipedia.org/wiki/Artie_L._Metcalf


WIKIPEDIA
The Free Encyclopedia

Main page


Article **Talk**

Artie L. Metcalf

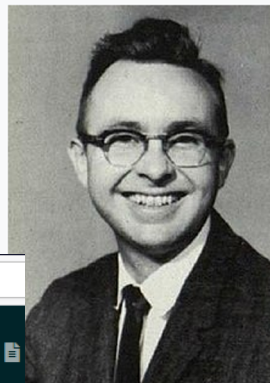
From Wikipedia, the free encyclopedia

Artie Lou Metcalf (July 5, 1929 – January 31, 2016)

← → ↺ 🏠 <https://bionomia.net/Q21341481>

 Profiles Scribes Organizations Datasets

Artie Lou Metcalf



1963 UTEP Faculty Headshot

July 5, 1929
Dexter, Kansas, U.S.
January 31, 2016
(aged 86)
Arkansas City, Kansas,
U.S.

Relationship
Nationality American
Institution University of Kansas


Scientific career

Field Biology, Malacology
Institution University of Texas at El Paso
Locations

Author abbrev.
(zoology)

A. L. Metcalf

← → ↺ 🏠 <https://www.wikidata.org/wiki/Q21341481>


WIKIDATA

Item **Discussion**

Artie L. Metcalf (Q21341481)

American malacologist and ichthyologist

Artie L. Metcalf

Artie Lou Metcalf; A. L. Metcalf; Artie L. Metcalf
(b. July 05, 1929 – d. January 31, 2016)
ichthyologist, malacologist, zoologist, taxonomist

 <https://www.wikidata.org/wiki/Q21341481>
 United States of America

Links with associated extended data....

← → ↺ 🏠 https://en.wikipedia.org/wiki/Ashmunella_harrisi



WIKIPEDIA
The Free Encyclopedia

[Main page](#)
[Contents](#)


Article [Talk](#)

Ashmunella harrisi

From Wikipedia, the free encyclopedia

Ashmunella harrisi is a [species](#) of air-breathing [land snail](#), a te

← → ↺ 🏠 <https://www.wikidata.org/wiki/Q3733353>




WIKIDATA

Item [Discussion](#)

Ashmunella harrisi (Q3733353)

species of mollusc

← → ↺ 🏠 www.marinespecies.org/aphia.php?p=taxdetails&id=1351671



World Register of Marine Species

Quick search... ⚙

WoRMS taxon details

★ *Ashmunella harrisi* Metcalf & Smartt, 1977

AphiaID 1351671 (urn:lsid:marinespecies.org:taxname:1351671)



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.

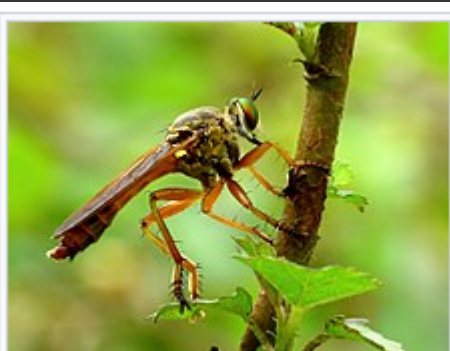


<https://www.wikidata.org/wiki/Wikidata:Introduction>

Links with associated extended data....

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

Michotamia aurata



Michotamia aurata



Taxonavigation [\[edit \]](#)

Taxonavigation: **Asiloidea** [\[Expand\]](#)

Familia: [Asilidae](#)

Genus: [Michotamia](#)

Species: ***Michotamia aurata***

Name [\[edit \]](#)

- *Michotamia aurata* ([FABRICIUS](#), 1794)

Synonymy [\[edit \]](#)

- *Asilus auratus* [FABRICIUS](#), 1794 (original combination)

References [\[edit \]](#)

- [FABRICIUS, J.C.](#) 1794. *Entomologia systematica emendata et aucta. Secundum classes, ordines, genera, species adjectis synonymis, locis, observationibus, descriptionibus.* 4 Christ. Gottl. Profft, Hafniae. 472 pp. [BHL](#) [Reference page](#). [original description: p. [387](#)]
- [ZHANG, L.](#), [SCARBROUGH, A.G.](#) & [YANG, D.](#) 2012. Review of the species of *Michotamia* from China with a description of a new species (Diptera, Asilidae). *ZooKeys* 184: 47–55. DOI: [10.3897/zookeys.184.2871](#) [Reference page](#).



ESN Suggested reading #4

Wikispecies Charter

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





Meet Siobhan

A New Zealand citizen scientist with a fondness for weevils.

A keen wikipediaian writing articles and uploading images of New Zealand species into Wikipedia.


**Siobhan
Leachman**

ORCID iD

 <https://orcid.org/0000-0002-5398-7721>

 Print view 

Also known as

Ambrosia10, S. Leachman 

Websites & Social Links

[Twitter](#)

[Wikipedia user page](#)

[Wikidata user page](#)

[Wikimedia Commons user page](#)

[LinkedIn](#)


[iNaturalist](#)

[Bloodhound](#)

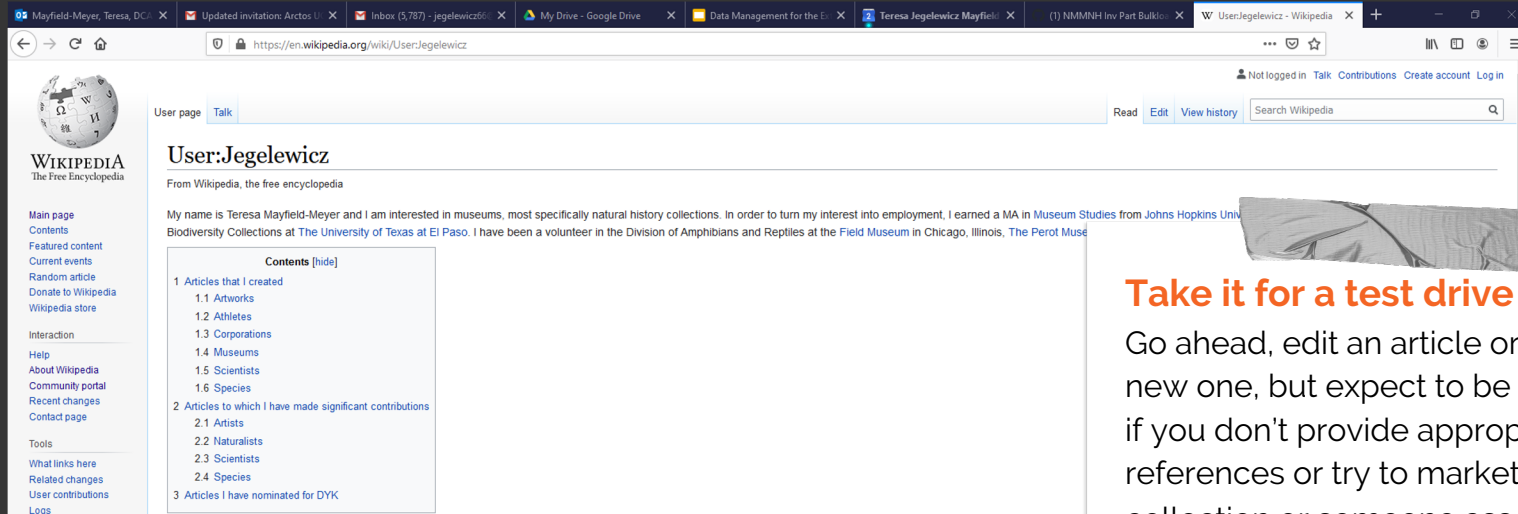
Country

New Zealand 

Keywords

Volunpeer, Volunteer, Crowdsourcing, Citizen Science, Wikipedia, Wikidata, Linked Data 

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.

<https://en.wikipedia.org/wiki/User:Jegelewicz>



ESN Suggested Reading #5

Question the Database! by Vickie Stone

in **Active Collections** Wood, Tisdale and Jones, eds.

→ **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.

Create databases that are more “culturally responsive”

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

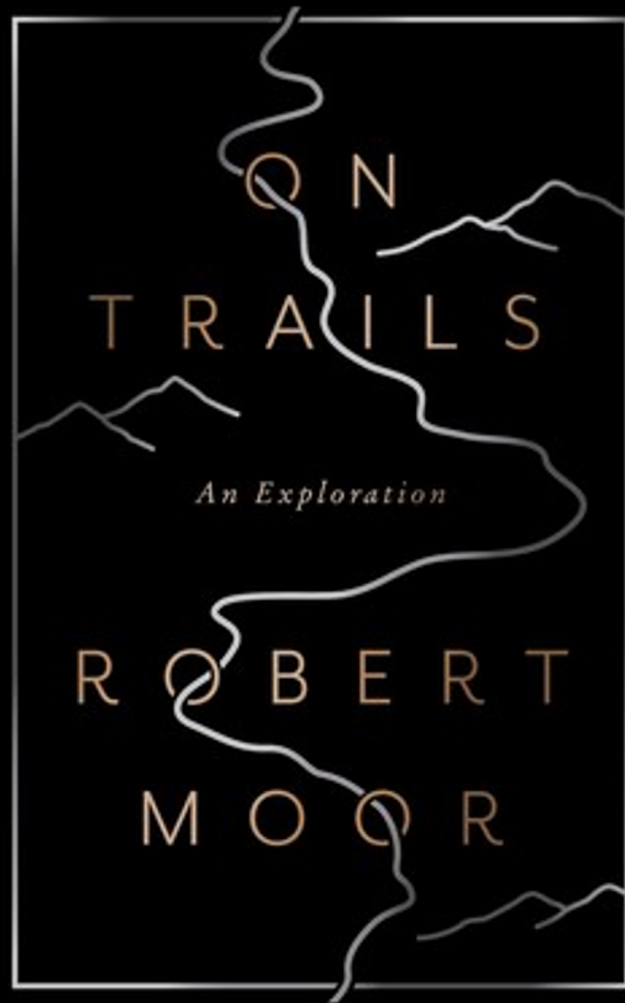


It's not that far fetched!

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