Tweaking the system: using e-Journal technology and existing citation tools to increase the visibility and measurable impact of museums, curation and specimen-based data.

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Before I commence:

If you find any of the ideas or information in this talk relevant to your own scholarly work, please cite this presentation as:

• Brief Introduction
• Conceptual benefits to this approach
• Logistical details
• Challenges / Discussions
METRICS can be in many forms

- #specimens or types
- #taxa
- #loans
- #visitors
- Etc.

- Metrics may fail to capture the actual activities taking place (e.g., specimen identifications, specimen preservation) OR be misaligned with the target (e.g., an ‘outcome’ vs ‘output’).

Key Performance Indicators (KPI) are the more general topic, and are used to evaluate a wide range of endeavors, professional activities and industries.
Oregon State Arthropod Collection is located at Oregon State University
Corvallis Oregon

Photo: Darryl Lai (using a drone)
Oregon State Arthropod Collection
College of Science
Department of Integrative Biology

Director:
Dr. D.R. Maddison

Curator/Manager
Dr. C.J. Marshall

- ~3 million specimens
- Global scope with Pacific Northwest emphasis
- 3 regular volunteers
- 2 active federal grants
- 5-10 student workers
For research units, two common evaluation metrics are funding ($) and impact factor/publications.
Entomological Collection Network.

Failure of museums and taxonomy to be formally cited in scholarly work means they are underrepresented by citation-based metrics.
Catalogs have historically been a publication of museums.

Catalogs are a common form of publication for museums. In many cases they are a SINGLE book/ledger/database that records new additions.

Oregon State Arthropod Collection Catalog was lost in 1980’s.

Databases/specimen records provide some (but not all) of the benefits to a true catalog.
Tweaking the system: using e-Journal technology and existing citation tools to increase the visibility and measurable impact of museums, curation and specimen-based data.
OSU SCHOLARS ARCHIVES

THIRD PARTY DATA-JOURNALS

CATALOG: OREGON STATE ARTHROPOD COLLECTION

OUR OWN e-JOURNAL
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A key motivator of this approach was OSAC’s digitization effort. We needed a more formal means to cite our individual specimen-based observational records and the datasets they are published in.
Specimen records for North American Lepidoptera (Insecta) in the Oregon State Arthropod Collection, Hepialidae Stephens, 1829

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Christopher J. Marshall

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Cite this work, including the attached dataset, as:


Introduction

These records were generated using funds from the LepNet project (Selman et al., 2017), a national collaborative effort to create digital records for North American Lepidoptera. The dataset published herein contains the label data for all North American specimens of Hepialidae residing at the Oregon State Arthropod Collection as of March 2019. A new version of these data records will be made available on the OSMC server (http://www.oregonstate.edu/OSMC) at the time of this publication. The data version, entitled OSAC_Hepialidae_2019_r3.0.dat, will be replaced in the near future with an official release OSAC_Hepialidae_2019_r4.0.dat, which will then also be archived as a supplemental file to this publication.

Methods

We include a text copy (csv) of the specimen records as a supplemental file to our articles.

Articles allow a fixed record of the dataset, provides additional context, bibliographic references and provides a place were we can highlight, summarize and discuss the data in the dataset, provide images or related information, etc.
Published specimen records are an incentive for voucher deposition and researchers using historical data as foundational info for other work...

...and create an archived record of our role in their project.
As with digitized projects, the OSAC Catalog provides a convenient vehicle to refer to additional specimen-related data and context that is not directly relevant to the primary paper, such as phenology and host record information.
Ability to formally publish content related to the collection, lets us decide what is ‘worthy’ of publishing.

Publishing as a journal means these publications are archived and citable.
CITATION is not about metrics

It is a cornerstone of academic scholarly work, including science.

It connects intellectual and academic knowledge, allowing readers to FIND, VERIFY and ASSESS the basis of new works.

Providing a means to record, elaborate on and reference museum specimens, museum activities/services, and contextual information about specimens/museums lets them be ‘picked’ up into this world.
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Open Journal Systems

“Scholars need the means to launch a new generation of journals committed to open access, and to help existing journals that elect to make the transition to open access...”

Budapest Open Access Initiative, 2002

Open Journal Systems (OJS) is a journal management and publishing system that has been developed by the Public Knowledge Project through its federally funded efforts to expand and improve access to research.
OPEN JOURNAL SYSTEMS

FREE OPEN SOURCE JOURNAL MANAGEMENT SYSTEM

Used by commercial and non-commercial journals: over 8000 journals

Supported by grant dollars and institutional contributors

Manages most aspects (other than page layout) of e-Journal production

peer and non-peer reviewed articles

manuscript submission, review, publication

creation of DOI’s*

journal available online, indexed (ISSN)*

archived electronically

Developing an integrated article-level metric system

*requires additional resources

https://pkp.sfu.ca/ojs/
Must be installed/managed on a server (IT support), some useful features are not free – but ARE affordable, steep learning curve, time
To folks savvy with Content Management Systems (e.g., drupal), OJS will seem like a complex CMS – replete with a head-bangingly frustrating interface.
Editorial process can be complex/long (peer reviewed)
Layout can be formal (inDesign) or Word generated pdf

In other words, the journal can be very professional or very streamlined
Doi’s are optional

They can be generated by Open Journal System based on a ‘formula’ set in the settings and built off a doi base assigned to the publishing institution.

For example, my DOI’s are based on the OSU Valley library’s doi root.

To mint DOI’s requires obtaining one from a subscribing institution ($250/yr).

http://dx.doi.org/10.5399/osu/cat_osac.3.2.4590

The doi registers basic metadata about the paper, increasing its findability but it connotes ‘authenticity’ too.
Archiving is important for our use

OJS – plugin uses LOCKSS

“Lots of Copies Keeps Stuff Safe”

Consortium backup-network

As wonderful as LOCKSS sounds, we plan to print, on paper, several copies and put them in libraries.... Just in case
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A curator’s most-limited resource is:

TIME

Is the added work of publishing museum related activities worthwhile?
Many volumes and issues
Many low-citation papers

VS

monograph/annual report
one citation for year with
index (pooled citation)

Maybe a single annual volume (published annual report) would be easier. Fewer, highly cited, publications might also better reflect ‘impact’?
Privacy Concerns

Would publishing loan records when made raise privacy concerns?
Will people actually cite these publications in their derivative work?
We are not alone – Software, Lab Protocols and Digital Photographs – also struggle to be formally recognized in published work that relies/uses them.

We owe it to ourselves to document our role in science (and society).

https://twitter.com/David_Hillis/status/746140595853266944