Measuring Impact by Empowering Users to Illustrate the Effort they Put in Natural History Collections

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BioScience

Biology Needs a Modern Assessment System for Professional Productivity FREE

Lucinda A. McDade, David R. Maddison, Robert Guralnick, Heather A. Piwowar, Mary Liz Jameson, Kristofer M. Helgen, Patrick S. Herendeen, Andrew Hill, Morgan L. Vis

BioScience, Volume 61, Issue 8, 1 August 2011, Pages 619–625,
https://doi.org/10.1525/bio.2011.61.8.8
Published: 01 August 2011

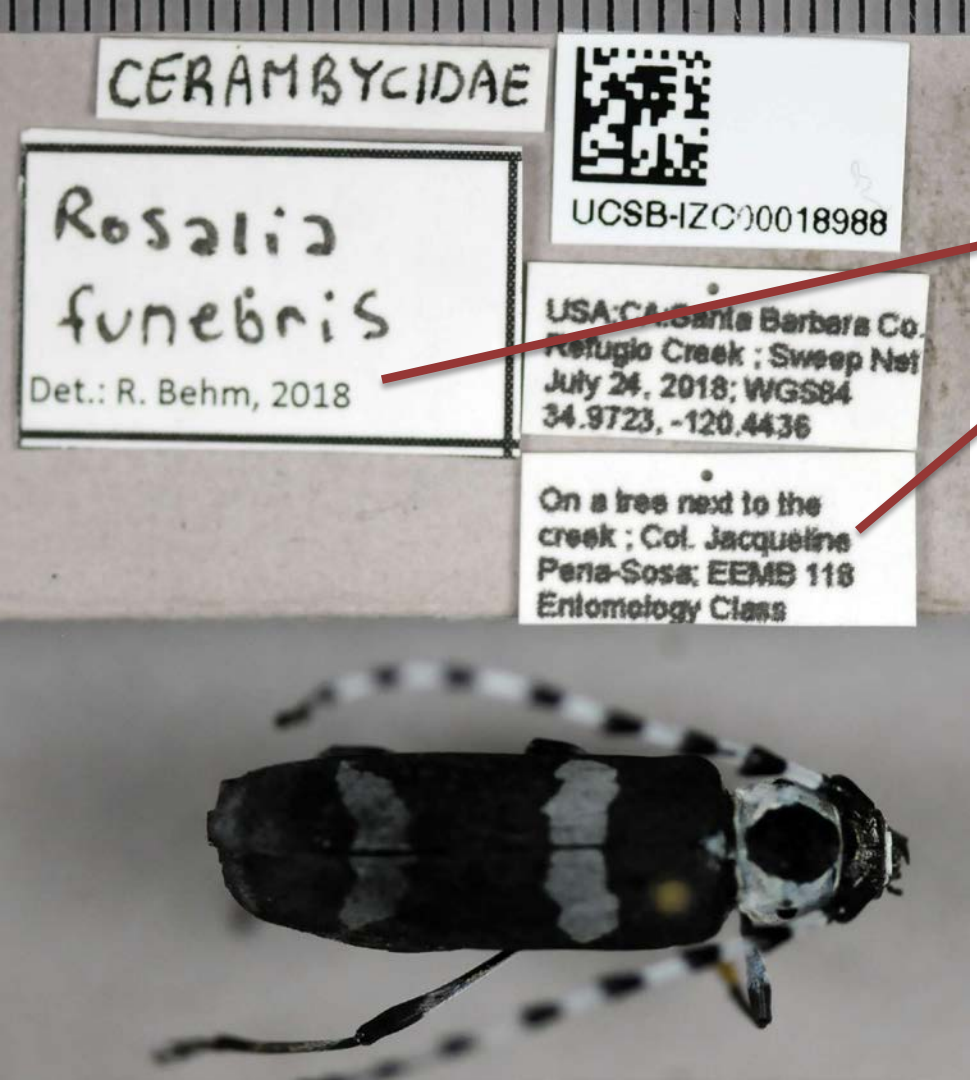
"Is it possible that the lack of recognition in the academic assessment system of these forms of productivity has contributed to the diminished status—indeed even the near disappearance from many academic departments—of traditional systematics…"

Natural History Museums Desperately Need

Brand Awareness

Meaningful Measures of Impact

How Do We Fix This?
(or at least make it better)



Det.: R. Behm, 2018

Col. Jacqueline Pena-Sosa

Index of Botanists

Name	Gray, Asa
Date of birth	1810
Date of death	1888
Remarks	[author note: Herbarium and types: GH. Exsiccatae: North American Gramineae and Cyperaceae (original in Gray Herbarium library).] [collector note: B, BM, BUF, C, DWC, FI, G, G-DC, GH (orig.), GRA, HBG, K, LE, LY, MASS, NY, OXF, P, P-DU, P-JU, S, W, WAG. Plantae Exsiccatae Grayanae issued long after Asa Gray's death]
URL	http://en.wikipedia.org/wiki/Asa_Gray
ASA Botanist ID	100103 botanist
GUID	http://purl.oclc.org/net/edu.harvard.huh/guid/uuid/3f8c70aa-1862-4784-8a53-f69ffe810fa0

Authority Management for People Names
Sofia, BU, 12-13 March 2019

Leader and Co-Leader:
Elspeth Haston (RBGE) and
Arnald Marcer (CREAF)
17 Participants

Review of existing people name identifiers
Presented existing pilot case studies
Recommended use of ORCID, wikidata, &
International Standard Name Identifier (ISNI)

For the Living

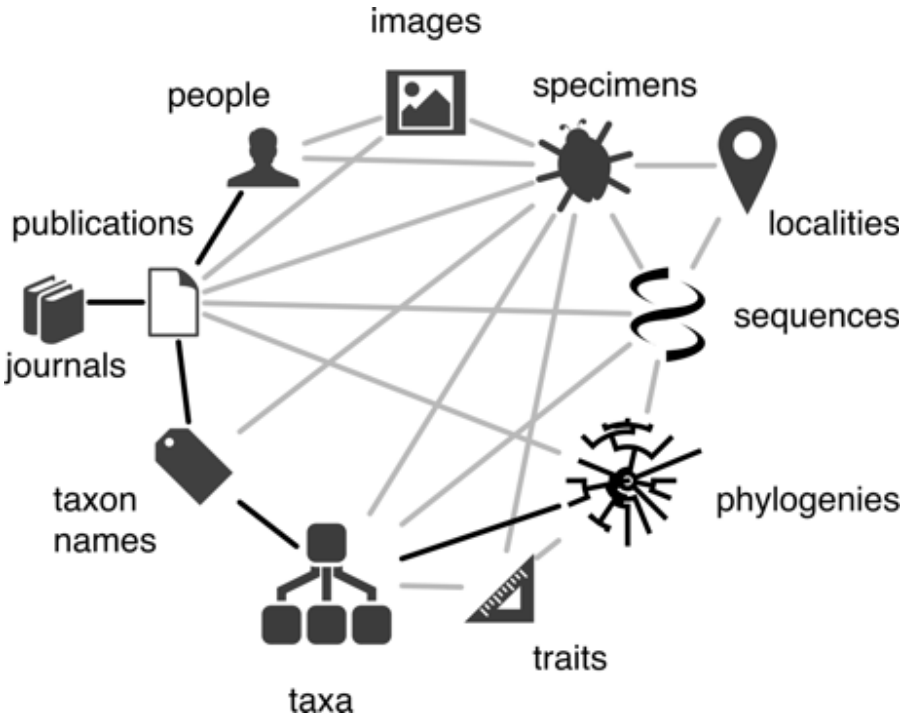
For the Deceased

Loaned specimens are returned with new dets.

Specimens are donated and exchanged

Experts visit museums to identify specimens

A citation graph!



PeerJ

Ozymandias: a biodiversity knowledge graph

Roderic D.M. Page

IBAHCM, MVLS, University of Glasgow, Glasgow, United Kingdom

ABSTRACT

Enormous quantities of biodiversity data are being made available online, but much of this data remains isolated in silos. One approach to breaking these silos is to map local, often database-specific identifiers to shared global identifiers. This mapping can then be used to construct a knowledge graph, where entities such as taxa, publications, people, places, specimens, sequences, and institutions are all part of a single, shared knowledge space. Motivated by the 2018 GBIF Ebbe Nielsen Challenge I explore the feasibility of constructing a "biodiversity knowledge graph" for the Australian fauna. The data cleaning and reconciliation steps involved in constructing the knowledge graph are described in detail. Examples are given of its application to understanding changes in patterns of taxonomic publication over time. A web interface to the knowledge graph (called "Ozymandias") is available at https://ozymandias-demo.herokuapp.com.

Drivers for the Institution

recognition for host institution

recognition for taxonomists' institution

"And don't make me count it!"
Fully automated
Quantifiable / Verifiable

Ingredients to Make This Happen

Newly digitized specimen

identifiedBy / recordedBy

https://orcid.org/0000-0001-9144-2848

Biodiversity Information Standards TDWG

GRBIO ?

institutionCode

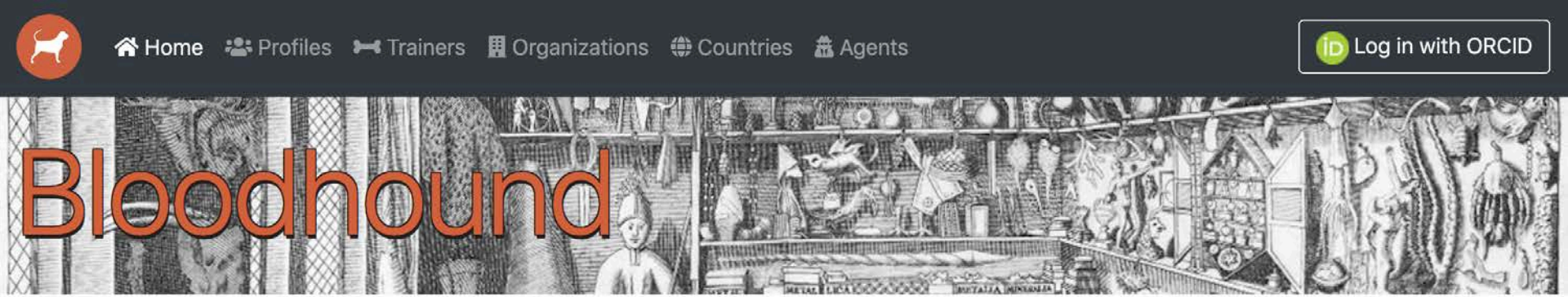
not sameAs

ORCID: ringgold, GRID

GBIF

dateIdentified

ORCID: employment/education start/end date



Claim the natural history specimens you collected or identified, track their use in new science, and help acknowledge your peers, mentors, and organizations.

https://bloodhound-tracker.net

canadian museum of nature
nature
musée canadien de la nature

Impact on Activities in Other Organizations

Current and previous personnel have claimed specimens now curated at the following organizations that they collected or identified while affiliated with Canadian Museum of Nature.

All Years

Specimens Collected

33 organizations **86,952 specimens**

KU	76,834
UTC	3,396
US	2,678

Are There Other Drivers?

Newly digitized specimen

identifiedBy / recordedBy

http://rs.tdwg.org/dwc/iri/identifiedBy

https://orcid.org/0000-0001-9144-2848

Andrew Johnston
@MAndrewJohnston

Following

This is a really cool tool! Claiming all the specimens you have identified/collected is uplifting and addicting (albeit a little time consuming) - This is an awesome profile that can be attributed to your @ORCID_Org ID

Dr. Hannah Owens
@HannahOish

Following

WOW! Natural history collector friends, there is a tool out there to link *YOU* to specimens you've collected and identified. Birds I prepped as a grad student in Kansas have made it as far as museums in Auckland! @BloodhoundTrack

Dean Hendrickson
@HendricksonDean

Follow

@dpsSpiders please add collector John Roscoe Hendrickson (Q62011107) to Bloodhound. Thx!

7:08 PM - 9 Mar 2019

1

© Kris-Mikael Krister

Dean Hendrickson @HendricksonDean · Mar 19

Replying to @dpsSpiders

Uncle John had a huge influence on getting me addicted to biology & conservation. Downloaded Bloodhound set, added some pivot tables and map, and sent it to cousins working on cataloging his specimens at Bishop Museum and working on his biography. They're psyched. THX!

1 1 2

GBIF

ENETwild modelling of wild boar distribution and abundance: initial model output based on hunting data and update of occurrence-based models Literature

Acevedo, P. Croft, S. Smith, G. Vicente, J. (2019) EFSA Supporting Publications

After presenting preliminary models to estimate the habitat suitability for wild boar in MSs and neighbouring countries as a proxy for its relative abundance (i.e. the relative representation of a species in a particular ecosystem, a kind of proxy of the density) the ENETWILD consortium has develop...

Sus scrofa • distribution • game management • hunting bags • population abundance • population monitoring

Journal article | Open access | Peer-reviewed

Data used in study DOI 10.15468/dl.v2ydsu

Get data | Share | Tools | Inside GBIF | Login

DOWNLOAD | 31 OCTOBER 2018

140,403 occurrences downloaded

DOI 10.15468/dl.v2ydsu

DOWNLOAD | 1 CITATION

FILTER APPLIED 31 OCTOBER 2018 | RERUN QUERY

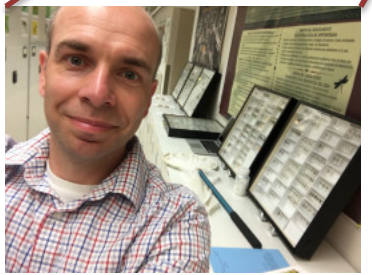
Citation: GBIF.org (31 October 2018) GBIF Occurrence Download https://doi.org/10.15468/dl.v2ydsu

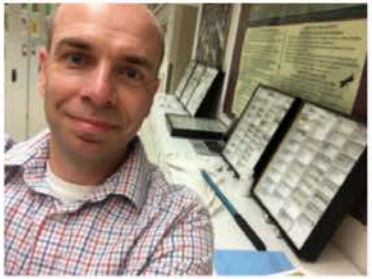
License: CC BY-NC 4.0

File: 9 MB CSV

Involved datasets: 131

Make sure to read the data user agreement and citation guidelines.





Torsten Dikow

cladistics, taxonomy, cybertaxonomy, biodiversity

https://orcid.org/0000-0003-4816-2909

Smithsonian Institution, Washington, DC, US
United States of America
Field notes

2 publications used Torsten's specimen data from the Global Biodiversity Information Facility (GBIF).

Science Enabled by Specimen Data

Figueira, R., & Lages, F. (2019). Museum and Herbarium Collections for Biodiversity Research in Angola. Biodiversity of Angola, 513–542. doi:10.1007/978-3-030-03083-4_19 https://doi.org/10.1007/978-3-030-03083-4_19

The importance of museum and herbarium collections is especially great in biodiverse countries such as Angola, an importance as great as the challenges facing the effective and sustained management of such facilities. The interface that Angola represents between tropical humid climates and semi-dese...

11 specimens

Park, D. S., & Razafindratsima, O. H. (2018). Anthropogenic threats can have cascading homogenizing effects on the phylogenetic and functional diversity of tropical ecosystems. Ecography, 42(1), 148–161. doi:10.1111/ecog.03825 https://doi.org/10.1111/ecog.03825

Determining the mechanisms that underlie species distributions and assemblages is necessary to effectively preserve biodiversity. This cannot be accomplished by examining a single taxonomic group, as communities comprise a plethora of interactions across species and trophic levels. Here, we examine ...

Home Profiles Trainers Organizatior

Michael Pirie

Annonaceae, Erica, Evolution, Phylogeny, Systematics, Taxonomy

https://orcid.org/0000-0003-0403-4470

Johannes Gutenberg Universität Mainz, Mainz, Rheinland-Pfalz, DE

Germany

0 Field notes

Pirie, Michael. 2019. Natural history specimens collected and/or identified and deposited. [Data set]. Zenodo. https://doi.org/10.5281/zenodo.2670039

DOI 10.5281/zenodo.2670039

zenodo

Michael D. Pirie

ORCID iD

https://orcid.org/0000-0003-0403-4470

Natural history specimens collected and/or identified and deposited.

Zenodo

2019-05-07 | data-set

DOI: 10.5281/zenodo.2750946

Source: DataCite ★ Preferred source


rctos


Specify


EMu
AXIELL


DINA

Be Responsible – The Metric Mantra

- Respect privacy
  - People, places, dates on specimen labels *could* reveal sensitive, incriminating information
- Anticipate potential for misuse
  - Numbers of specimens collected or identified by individuals is partly an artifact of the taxa, community practices
- Anticipate changes in behavior
  - *Should* we support or dissuade the gaming of a metric?
- Cut the wick at the first sign of weaponization

A metric (on/for people) must…

1. Be recognized and used when hiring new staff and when evaluating applications for promotion
2. Be voluntarily reported on and included in professional resumes
3. Be included as criteria when evaluating applicants for awards (funding, honoraria from societies)
4. Be easily, transparently, and verifiably calculated
5. Fluctuate in response to known causes
6. Lead to decisions that trigger action
7. Not disenfranchise anyone
8. Incorporate network effects