Data citation for humans and machines: the perspective from Dryad and DataCite

Todd Vision
Dept. of Biology and School of Information and Library Sciences, University of North Carolina at Chapel Hill, http://orcid.org/0000-0002-6133-2581, @tjvision

Patricia Cruse
Executive Director, DataCite, http://orcid.org/0000-0002-9300-5278

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Data Citation: Developing Policy and Practice
Types of publication-data links

Original publication

Data

Reuse publication

Data Citation: Developing Policy and Practice
When using this data, please cite the original article:


Additionally, please cite the Dryad data package:

Cites and references from *original* articles to data: highly variable (for both humans and machines)

Data referenced in reuse articles:

human readable when present, but even more rare

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Novel forests maintain ecosystem processes after the decline of native tree species

JOSEPH MASCARO, R. FLINT HUGHES, AND STEFAN A. SCHNITZER

1Department of Biological Sciences, University of Wisconsin, Milwaukee, Wisconsin 53211 USA
2Institute for Pacific Islands Forestry, USDA Forest Service, Hilo, Hawaii 96720 USA
3Smithsonian Tropical Research Institute, Apartado 2072, Balboa, Republic of Panama

Abstract. The positive relationship between species diversity (richness and evenness) and critical ecosystem functions, such as productivity, carbon storage, and nutrient cycling, is often used to predict the consequences of extinction. At regional scales, however, plant species richness is mostly increasing rather than decreasing because successful plant species introductions far outnumber extinctions. If these regional increases in richness lead to local


### Linking from data to original publication: Machine readable via DataCite DOI

**doi:10.5061/DRYAD.2B65B**

This page represents DataCite's metadata for doi:10.5061/DRYAD.2B65B.

For a landing page of this dataset please follow [http://dx.doi.org/10.5061/DRYAD.2B65B](http://dx.doi.org/10.5061/DRYAD.2B65B)

**Citation**
da Silva, Luis; Pereira Coutinho, António Xavier; Heleno, Ruben; Tenreiro, Paulo; Ramos, Jaime; (2015): Data from: Dispersal of fungi spores by non-specialized flower-visited birds; Dryad Digital Repository.

[http://dx.doi.org/10.5061/DRYAD.2B65B](http://dx.doi.org/10.5061/DRYAD.2B65B) [RIS] [BibTeX]

<table>
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<th><strong>Resource type</strong></th>
<th>Dataset</th>
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**Subjects**
- Fungi dispersal
- Directed dispersal
- Flower visitation

**Rights**
[http://creativecommons.org/publicdomain/zero/1.0/](http://creativecommons.org/publicdomain/zero/1.0/)

**Related identifiers**
- **HasPart**
  - doi:10.5061/DRYAD.2B65B/1
- **IsReferencedBy**
  - doi:10.1111/JAV.00806
Linking from original publication to data: Can be achieved by machines even with only the DataCite DOI.
Links from data to data: nice, but spotty and laborious
Cites from any publication to data: can be achieved via text mining.
Combining links through DataCite

Data from: Social networks predict gut microbiome composition in wild baboons
Jenny Tung, Luis B. Barriero, Michael B. Burns, J. C. Grenier, Josh Lynch, L. E. Grieneisen .. & E. A. Archie
Dataset published 2016 via Dryad Digital Repository

Europe PMC (Fulltext) 1
http://doi.org/10.5061/DRYAD.8GP03  Cite  Add to ORCID record

Social networks predict gut microbiome composition in wild baboons
Work published March 16, 2015
References http://doi.org/10.5061/DRYAD.8GP03  DataCite (Crossref)
http://doi.org/10.7554/ELIFE.05224  Cite

Mica_1yrproximity
Work published 2016
Is part of http://doi.org/10.5061/DRYAD.8GP03  DataCite (RelatedIdentifier)
http://doi.org/10.5061/DRYAD.8GP03.2/10.2  Cite  Add to ORCID record
ORCID data claims

Genome-scale phylogenetics: Inferring the plant tree of life from 18,896 gene trees: Systematic Biology 2011
DOI: 10.1093/sysbio/syq072
http://www.scopus.com/inward/record.url?eid=2-s2.0-79951569533&partnerID=MN8TOARS

Data from: Genome-scale phylogenetics: inferring the plant tree of life from 18,896 gene trees 2010
DOI: 10.5061/DRYAD.788I
Burleigh, J. Gordon; Bansal, Mukul S.; Eulenstein, Oliver; Hartmann, Stefanie; Wehe, André; Vision, Todd J.; , (2010). "Data from: Genome-scale phylogenetics: inferring the plant tree of life from 18,896 gene trees"
A structured citation from a reuse article to data: are we meeting the needs of both humans and machines?

Methods

Analysis of patterns of sex chromosome-autosome fusions in vertebrates

We compiled lists of species with multiple sex chromosome systems (X1X2Y, XY1Y2, ZW1W2, and Z1Z2W systems) from the Tree of Sex database [17]. Although X1X2Y systems (or ZW1W2 systems) can also arise from species with XO (or ZO) systems through a reciprocal translocation between an X (or a Z) and an autosome [2,20], XO or ZO systems are rare in vertebrates [17] (Table 1). In addition, although fission of sex chromosomes can also create multiple sex chromosome systems [2,20], such fissions are also rare in vertebrates [18,20,21]. We therefore focus this discussion on fusions, although the data analysis allowed fissions as well as fusions (S1 Text).


Data Availability Statement: Sex chromosome data are available from the Dryad (http://dx.doi.org/10.5061/dryad.v1908). Analytical tools and code are available in the Supporting Information file (S1 Text) or at https://github.com/mwpennell/fuse.

o **Sustainable services**
  - Building upon trusted identifier services
  - ORCID-DataCite claiming service
  - DataCite Event Data: [http://eventdatacite.datacite.org](http://eventdatacite.datacite.org)
  - DataCite Search (by ORCID, funder, etc): [http://search.datacite.org/](http://search.datacite.org/)

o **Research**
  - On gaps in workflows, metadata interoperability
  - Example: Funding metadata
  - Another example: organizational identifiers: [https://project-thor.eu/2016/06/06/](https://project-thor.eu/2016/06/06/)

o **Community building**
  - Knowledge Hub
    - [https://project-thor.readme.io](https://project-thor.readme.io)
  - Ambassador program
    - [http://project-thor.eu/become-an-ambassador/](http://project-thor.eu/become-an-ambassador/)
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A searchable catalog of 1,394 research data repositories from around the world in all disciplines ... 

- Publisher, e.g., Dryad
- Sub/Disciplinary, e.g., RKMP
- Consortium, e.g., ICPSR
- Country, e.g., Research Data Australia
- Government, e.g., Data Portal India
- Research center, e.g., NASA GES DISC
- Instrument, e.g., CHANDRA
- General-purpose, e.g., FigShare
- Roll-your-own, e.g., DataVerse
- University, e.g., PURR