Archiving and Publishing

Bethany Allen & Harriet B. Drage

Learning objectives

1. Get moving and thinking about/discussing archiving with others
2. Understand why archiving is important, and what should be archived
3. Have some ideas of where working documents can be archived and openly accessible

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Group discussion!

Discuss	Discuss questions in small groups – 10 mins
Answer	Answers on post-its and stick to wall – 5 mins
Read	Read the post-its Discuss with neighbours/others – 10 mins

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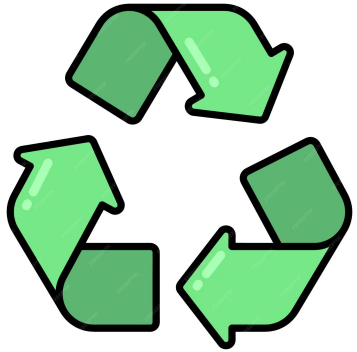
1. *What* do you think it is important for researchers to archive?
2. *Why* is archiving important?
3. *Where* can you archive research materials?
4. What are the *major barriers* to archiving?

Why archive?

- Support open science
- Reproducibility/replicability
- Build on research/reusability
- Useful for Future You
- Better citeability
- Transparency of work
  - Workflow
  - Future jobs
- Reinforce good practices
- Prevent duplicated effort



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What should we archive?

Everything!

Raw data, processed data, code, supplementaries, workflow, general data, your thoughts and feelings...

Ideally **non-proprietary** file formats

Metadata (README) file – explanation of contents

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Where to archive?

DRYAD figshare

Dryad, Zenodo, FigShare, the Open Science Framework (OSF), Pangaea, institutional and funding body repositories...

zenodo OSF

PANGAEA.
Data Publisher for Earth & Environmental Science

General data: PBDB and Neotoma (occurrence data), MorphoSource, MorphoBank...

MorphoSource

MORPHOBANK
HOMOLOGY OF PHENOTYPES OVER THE WEB

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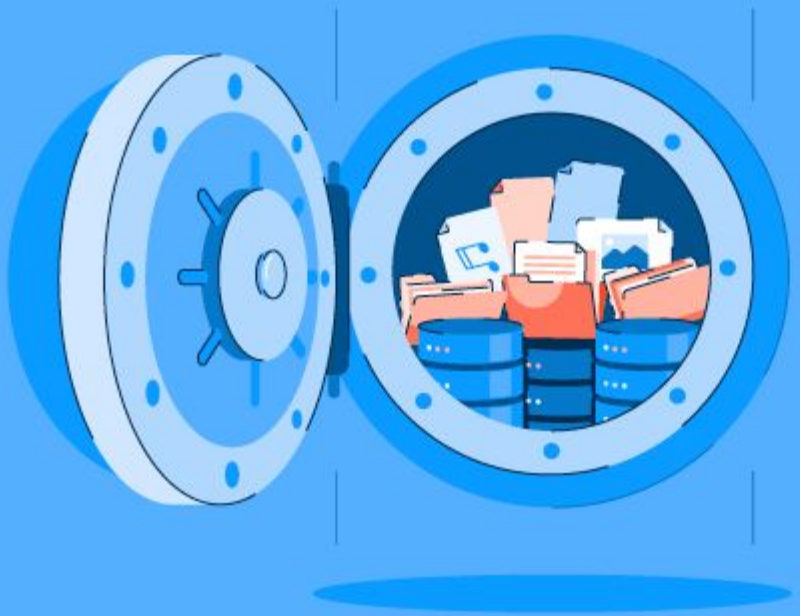
Where to archive?

But to consider:

- Longevity
- Cost
- Capacity
- Accessibility
- Discoverability
- Citability
- Version control
- Licensing



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Open access publishing

Now many options for diamond open access journals (free to publish, free to access):

Lethaia, *Open Palaeontology*, *Palaeontologia Electronica*, *Sedimentologika*...

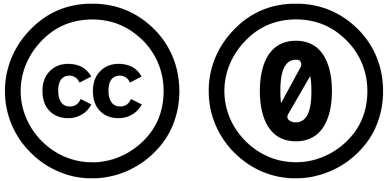
Other diamond options:

Preprint servers (*BioRxiv, EcoEvoRxiv,* etc.), *PCI Palaeontology* (peer review without formal publishing)

Licensing

Archiving material requires choosing an appropriate license

- Usually CC0 (“No Rights Reserved”) is appropriate for archives with only new data, allowing easy reuse, but does not require attribution
- A variety of potentially suitable CC-BY allowing reuse but requiring attribution
- Other potential licenses for code: MIT, Apache, GNU
- Tools exist for deciding this
- Might be related to your work contract



FAIR and CARE data standards

These are guidelines you can follow for your data and other archives

FAIR: intended to provide guidelines to improve the **F**indability, **A**ccessibility, **I**nteroperability, and **R**euse of digital assets

CARE Principles for Indigenous Data Governance
Intended to support design of data ecosystems that enable Indigenous Peoples to derive benefit

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Case study: FAIR and CARE

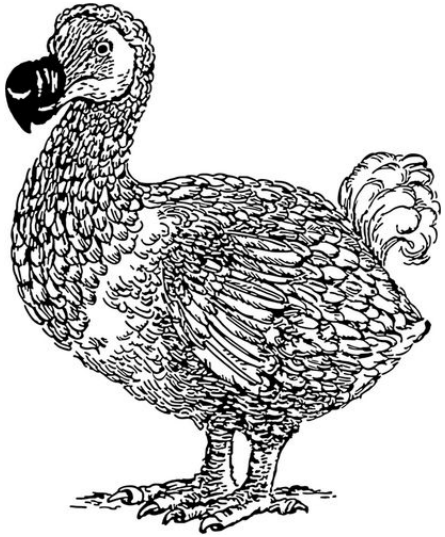
AREA
Royal Geographical Society with IBG
Advancing geography and geographical learning

ETHICS IN / OF GEOGRAPHICAL RESEARCH | Open Access

Dodo dilemmas: Conflicting ethical loyalties in conservation social science research

Hannah Fair, Viola Schreer, Paul Keil, Laur Kiik, Niki Rust

First published: 12 October 2022 | https://doi.org/10.1111/area.12839 | Citations: 3



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SORTEE: Society for Open, Reliable and Transparent Ecology and Evolutionary Biology

Runs EcoEvoRxiv, alongside other events and initiatives to facilitate and create discussion around open science in ecology and evolution

https://www.sortee.org

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Linking our Github repo to Zenodo!

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Extra resources

- Jones et al. 2025: https://doi.org/10.32942/X2FS8M
- Darwin Core (https://dwc.tdwg.org/) may be useful (see https://fairsharing.org/ for other data and metadata standards
- https://creativecommons.org/share-your-work/cclicenses/
- https://choosealicense.com
- Diamond peer review platform: https://paleo.peercommunityin.org/
- https://www.go-fair.org/fair-principles/
- https://www.gida-global.org/care

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